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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/954,531	09/18/2001	Zoe Weaver	689290-77	8649

7590 07/18/2003

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EXAMINER
SMITH, CAROLYN L

ART UNIT	PAPER NUMBER
1631	

DATE MAILED: 07/18/2003

19

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/954,531	WEAVER, ZOE	
	Examiner	Art Unit	
	Carolyn L Smith	1631	

-- The MAILING DATE of this communication appears n the cover sheet with the corresp ndence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 May 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35 and 37-48* is/are pending in the application.

4a) Of the above claim(s) *18-35 and 37-46* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17,47 and 48* is/are rejected.

7)☒ Claim(s) *2,4-8,10,15 and 47* is/are objected to.

8)☒ Claim(s) *1-35 and 37-48* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *6,9* .
4) ☒ Interview Summary (PTO-413) Paper No(s). *13* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: *See Continuation Sheet* .

Continuation of Attachment(s) 6). Other: Sequence Match Listing (44 pages).

DETAILED ACTION

Applicant's election with traverse of Group I (claims 1-17); sequence elections of SEQ ID NO: 110, 653, 683, 767, 804, 820, 910, 1019, 1040, and 1247; the amendment of claims 1-5, 9, 11-15, 18, 21-24, and 39; the cancellation of claim 36; and the addition of new claims 47-48 in Paper Nos. 11 and 12, filed 5/27/03, are acknowledged. Claims 18-46 are withdrawn from consideration as being drawn to non-elected Groups.

Based on a telephone interview on 2/21/03, Applicant was allowed to elect up to 10 sequences for the sequence election requirement.

Applicant's traversal is on the grounds that Groups I and VI should be combined as the claims are limited to the use of compounds having activity in the screening claims.

Applicant's request to combine Groups I and VI into one invention was found unpersuasive because of the following reasons (summarized from the restriction paper):

First, Applicant presented no argument or reasoning as to why these Groups should be combined. Second, as summarized on page 5 of the Restriction Paper, mailed 1/27/03, Groups I and VI are directed to a process and method that comprise different means and produce different results/goals. Group I identifies agents using putative modulating materials via cell contact which is different from the results of Group VI. Group VI treats and protects an entity from cancer which is a process not found in the Group I. These distinct processes and methods are often separately characterized and published in literature and would add undue search burden if they were examined together. Thus, they are considered distinct invention types for restriction purposes.

The requirements are still deemed proper and are therefore made FINAL.

Claims herein under examination are 1-5 (amended), 6-8, 9 (amended), 10, 11-15 (amended), 16-17, 47 (new), and 48 (new).

Claim Objections

Claims 2, 4-8, 10, and 47 are objected to due to the inclusion of subject matter which has been non-elected due to a restriction requirement and therefore withdrawn from consideration. The non-elected subject matter in claims 2, 4-8, 10, and 47 is summarized as follows: Claims 2, 6-8, 10, and 47 contain sequences, such as sequences other than SEQ ID NO: 110, 653, 683, 767, 804, 820, 910, 1019, 1040, and 1247, which are non-elected subject matter. Removal of non-elected subject matter is requested. Claims 4 and 5 are also objected to due to their direct or indirect dependency from claim 2.

Claim 15 is objected to for the following minor informality: Claim 15 recites the phrase "of one of claim 1" which does not make grammatical sense. Correction of this syntactical inadequacy is requested.

Claim Rejections – 35 U.S.C. 112, first paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

LACK OF WRITTEN DESCRIPTION

Claims 1-17, 47, and 48 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor, at the time of the invention was filed, had possession of the claimed invention.

The specification discloses SEQ ID NO: 110, 653, 683, 767, 804, 820, 910, 1019, 1040, and 1247 which correspond to nucleic acid sequences. SEQ ID NO: 110, 653, 683, 767, 804, 820, 910, 1019, 1040, and 1247 and their full complements meet the written description provisions of 35 U.S.C. 112, first paragraph. However, due to the open claim language of "containing a gene that corresponds to a polynucleotide" (claim 1) and "comprising a nucleotide sequence corresponding to a gene" (claim 54), these claims encompass sequences which do not meet the written description provision of 35 U.S.C. 112, first paragraph. The specification provides insufficient written description to support the genus encompassed by these claims.

Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, makes clear that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention.* The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See Vas-Cath at page 1116.)

With the exception of SEQ ID NO: 110, 653, 683, 767, 804, 820, 910, 1019, 1040, and 1247, the skilled artisan cannot envision the detailed chemical structure of the encompassed polynucleotides and/or proteins, regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method for isolating it. The nucleic acid itself is required. See Fiers v. Revel, 25 USPQ2d 1601, 1606 (CAFC 1993) and Amgen Inc. V. Chugai Pharmacentical Co. Ltd., 18 USPQ2d 1016. In Fiddes v. Baird, 30 USPQ2d 1481, 1483, claims directed to mammalian FGF's were found unpatentable due to lack of written description for the broad class. The specification provided only the bovine sequence.

Finally, University of California v. Eli Lilly and Co., 43 USPQ2d 1398, 1404, 1405 held that:

...To fulfill the written description requirement, a patent specification must describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that "the inventor invented the claimed invention." *Lockwood v. American Airlines, Inc.* , 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (1997); *In re Gosteli* , 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989) (" [T]he description must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed."). Thus, an applicant complies with the written description requirement "by describing the invention, with all its claimed limitations, not that which makes it obvious," and by using "such descriptive means as words, structures, figures, diagrams, formulas, etc., that set forth the claimed invention." *Lockwood* , 107 F.3d at 1572, 41 USPQ2d at 1966.

Therefore, only SEQ ID NO: 110, 653, 683, 767, 804, 820, 910, 1019, 1040, and 1247 and their full length complements, but not the full breadth of the claims meet the written description provision of 35 USC 112, first paragraph. The species specifically disclosed are not representative of the genus because the genus is highly variant. Applicant is reminded that Vas-Cath makes clear that the written description provision of 35 USC 112 is severable from its enablement provision. (See page 1115.)

Claims Rejected Under 35 U.S.C. § 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17, 47, and 48 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention.

Claims 1 (line 3) and 48 (line 4) recite the terms "corresponds" and "corresponding", respectively, which are vague and indefinite. It is unclear what criteria and to what extent the sequence must be similar to a gene to be considered to have the "corresponding" attribute. For

example, a nucleotide sequence corresponding to a gene could be the full-length nucleotide sequence of that gene. In another example the sequence could be a fragment, as a hybridization probe which is a fragment may be considered to correspond to a gene via the usage of such a probe for detection. Another interpretation is that the nucleotide sequence may include a sequence similar to the gene but with modifications made at various nucleotides and several other scenarios. Clarification of the metes and bounds of the instant claims is required. Claims 2-17 and 47 are also rejected due to their direct and indirect dependency from claim 1.

Claims 1 and 48 recite the terms "increased" (line 5 of both claims and line 14 of claim 48), "elevated" (line 6 of both claims; line 12 of claim 1; and line 12 of claim 48), "increase" (line 11 of claim 1 and line 11 of claim 48), "decrease" (line 13 of claim 1 and line 13 of claim 48) which are vague and indefinite. It is unclear what threshold Applicants intend to use for determining if expression is significantly increased, elevated, or decreased as it is well known that while scientific data may be different, it may not be significantly different if variations are caused by fluctuations including experimental processing or measurement error. Clarification of the metes and bounds of these terms is requested. Claims 2-17 and 47 are also rejected due to their direct and indirect dependency from claim 1.

Claims 1 and 48 recite the phrases "cancerous cell over that in a non-cancerous cell" (claim 1 [lines 5-6 and 14] and claim 48 [lines 5 and 14]) and "non-cancerous cell over that in a cancerous cell" (claim 1 [lines 6-7 and 12] and claim 48 [lines 6 and 12]) which is vague and indefinite. Besides their cancerous status, it is unclear in what aspects these cells are related, such as if these cells are from the same or different type of organ tissue as well as the same or different type of organism which would aid in determining test relevancy. Clarification of the

metes and bounds of these phrases is requested. Claims 2-17 and 47 are also rejected due to their direct and indirect dependency from claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-17, 47, and 48 are rejected under 35 U.S.C. 102(e)(2) as being anticipated by Young et al. (WO 01/94629).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Young et al. disclose a process of screening novel drugs using genes, including oncogenes (page 2, lines 12-17). Young et al. disclose using a set of genes whose expression, non-expression, or change (increase or decrease) in expression, are indicative of cancerous or non-cancerous status of a given cell (page 2, lines 22-25). Young et al. disclose sequences of SEQ ID NO: 1-8447 or sequences substantially identical to these sequences, some of which are

complete or near matches to SEQ ID NO: 110, 653, 683, 767, 804, 820, 910, 1019, 1040, and 1247 of the instant invention (see Sequence match listings and following paragraph). Young et al. disclose using signature gene sets for assaying the ability of chemical agents to modulate expression of the gene sets up or down (page 3, first paragraph). Young et al. disclose using gene sequences expressed only in infiltrating ductal carcinoma of the breast, only in breast carcinoma, only in normal breast tissues, and only in infiltrating lobular carcinoma of the breast (page 17, third paragraph to page 18, first paragraph). Young et al. disclose using chemical agents known for their ability to modulate cancerous genes (page 3, paragraphs 3 and 4). Young et al. disclose producing a product including collected data with respect to the agent used in the screening process (page 5, first paragraph). Young et al. disclose identifying genes that are expressed at higher levels in cancer cells than in normal cells or expressed at lower levels in cancer cells than in normal cells (page 6, second paragraph). Young et al. disclose exposing cells to chemical agents, determining changes in expression wherein a change is indicative of anti-neoplastic activity (page 6, third paragraph). Young et al. disclose comparing chemical agent exposure versus no exposure to the genes (page 7, first paragraph). Young et al. disclose the chemical agent modulates expression in one, two, three, five, or ten genes, or where all genes are modulated (page 7, second paragraph). Young et al. disclose the agent can be an apoptosis-inducing agent (in claim 21) inducing cell death (page 27, third paragraph). Young et al. disclose in claim 24 the gene number increases which is replication.

Due to the open claim language of "a gene that corresponds to a polynucleotide" (claim 1) and "a polynucleotide comprising a nucleotide sequence corresponding to a gene" (claim 48), a prior art polynucleotide need not be 100% identical, although most of those described below

are an exact match. Young et al. disclose sequences (ABL62840 and ABL63054) which are 100% identical to SEQ ID NO: 110 of the instant invention. Young et al. disclose sequences (ABL63383, ABL64857, ABL65548, and ABL66020) which are 100% identical to SEQ ID NO: 653 of the instant invention. Young et al. disclose sequences (ABL63413 and ABL63830) which are 100% identical to SEQ ID NO: 683 of the instant invention. Young et al. disclose sequences (ABL63497 and ABL63936) which are 100% identical to SEQ ID NO: 767 of the instant invention. Young et al. disclose sequences (ABL61767 and ABL63534) which are 99.8% identical to SEQ ID NO: 804 of the instant invention. Young et al. disclose a sequence (ABL63550) which is 100% identical to SEQ ID NO: 820 of the instant invention. Young et al. disclose a sequence (ABL63640) which is 97.9% identical to SEQ ID NO: 910 of the instant invention. Young et al. disclose sequences (ABL63749) which are 99.6% identical to SEQ ID NO: 1019 of the instant invention. Young et al. disclose sequences (ABL63770, ABL66331, and ABL67711) which are 100% identical to SEQ ID NO: 1040 of the instant invention. Young et al. disclose a sequence (ABL63977) which is 99.8% identical to SEQ ID NO: 1247 of the instant invention.

Thus, Young et al. anticipate the instant invention.

Claim Rejections – 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary

skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-17, 47, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al. (P/N 6,232,065) in view of GenBank (various Accession numbers), Young et al. (WO 01/94629), and Kinzler et al. (P/N 5,702,903).

Robinson et al. describe methods and compositions for screening factors that affect the expression patterns of individual genes or groups of genes in various disease states such as from normal, cancer, and other metastatic tissue samples (col. 1, lines 4-10; col. 12, lines 17-44; and col. 23, lines 12-38). Robinson et al. describe studying the effects of exogenously added compounds (col. 22, lines 59-62) on thousands of genes including multiple genes from specific gene families (col. 13, lines 1-22) which is reasonably interpreted as a signature gene set. Robinson et al. describe comparing metastatic cancer tissue with non-metastatic cancer tissue to identify differentially expressed genes as markers of metastatic potential (col. 16, lines 19-22). The presence or absence of these markers can then be assessed in various clinical cancer isolates (col. 16, lines 22-24). Robinson et al. describe anti-cancer compounds (col. 16, line 31) and drug screening to look for compounds to alter genes known to be implicated in a disease state, such as gene over-expression or under-expression in cancer cells as opposed to normal cells (col. 16, lines 48-57). Robinson et al. provide an assaying example such that if a gene family member is known to be overexpressed in cancer cells (compared to normal cells), then one can look for drugs that reduce the expression of the suspect gene to normal levels (col. 16, lines 52-57). Robinson et al. describe variations of such comparisons are included in their invention (col. 16, lines 58-60). Robinson et al. describe examining an entire gene family expression profile and

identifying important marker genes that can be used in future experiments to identify cancer and other cancer-related testing (col. 17, lines 4-19). Robinson et al. describe providing results for gene expression levels. Robinson et al. describe results being presented in a comparative format including high expression in most samples, low expression in most samples, and expression limited to only a few cell types in the panel (col. 20, lines 48-58) which exemplifies various degrees of expression. Robinson et al. describe many of the multiple genes showing expression changes in a particular tyrosine kinase gene family set (col. 21, lines 9-27 and col. 23, lines 12-38) as mentioned in claims 47-49. Robinson et al. describe using an assortment of tissues from various organs, including from a breast adenocarcinoma cell line (col. 19, line 63 and Table 1). Robinson et al. describe using adenocarcinoma cell lines, glioblastoma, and neuroblastoma cells in Table 1. Robinson et al. describe various gene modulating compounds such as drugs, growth factors, cytokines, and hormones that can affect neoplastic activity of cancerous cells upon contact (col. 22, lines 59-67). Robinson et al. describe an increased concentration of cancerous cells which is an accelerated replication compared to normal cells (col. 23, lines 28-38). Robinson et al. do not describe a decrease in neoplastic activity due to cell death and particular sequences (SEQ ID NO: 110, 653, 683, 767, 804, 820, 910, 1019, 1040, and 1247) that are elected in the instant invention.

Young et al. describe the use of cells from infiltrating ductal carcinoma of the breast, breast carcinoma, normal breast tissues, and infiltrating lobular carcinoma of the breast (page 17, third paragraph to page 18, first paragraph). Young et al. describe in claim 21 that the agent is an apoptosis-inducing agent. Young et al. describe a process of screening novel drugs using genes, including oncogenes (page 2, lines 12-17). Young et al. describe using a set of genes whose

expression, non-expression, or change (increase or decrease) in expression, are indicative of cancerous or non-cancerous status of a given cell (page 2, lines 22-25). Due to the open claim language of "a gene that corresponds to a polynucleotide" (claim 1) and "a polynucleotide comprising a nucleotide sequence corresponding to a gene" (claim 48), a prior art polynucleotide need not be 100% identical, although most of those described below are an exact match. GenBank describes sequences (AP001082, AP000727, AA485973, and AA968812) which are 100% identical to SEQ ID NO: 110 of the instant invention. Young et al. describe sequences (ABL62840 and ABL63054) which are 100% identical to SEQ ID NO: 110 of the instant invention. GenBank describes sequences (AA478962) which are 100% identical to SEQ ID NO: 653 of the instant invention. Young et al. describe sequences (ABL63383, ABL64857, ABL65548, and ABL66020) which are 100% identical to SEQ ID NO: 653 of the instant invention. GenBank describes a sequence (N64489) which is 100% identical to SEQ ID NO: 683 of the instant invention. Young et al. describe sequences (ABL63413 and ABL63830) which are 100% identical to SEQ ID NO: 683 of the instant invention. GenBank describes a sequence (AA227221) which is 100% identical to SEQ ID NO: 767 of the instant invention. Young et al. describe sequences (ABL63497 and ABL63936) which are 100% identical to SEQ ID NO: 767 of the instant invention. GenBank describes a sequence (D80055) which is 99.8% identical to SEQ ID NO: 804 of the instant invention. Young et al. describe sequences (ABL61767 and ABL63534) which are 99.8% identical to SEQ ID NO: 804 of the instant invention. GenBank describes a sequence (N45300) which are 100% identical to SEQ ID NO: 820 of the instant invention. Young et al. describe a sequence (ABL63550) which is 100% identical to SEQ ID NO: 820 of the instant invention. GenBank describes sequences (D60118)

which are 97.9% identical to SEQ ID NO: 910 of the instant invention. Young et al. describe a sequence (ABL63640) which is 97.9% identical to SEQ ID NO: 910 of the instant invention. GenBank describes a sequence (H02533) which is 99.6% identical to SEQ ID NO: 1019 of the instant invention. Young et al. describe a sequence (ABL63749) which is 99.6% identical to SEQ ID NO: 1019 of the instant invention. GenBank describes sequences (AA010665) which are 100% identical to SEQ ID NO: 1040 of the instant invention. Young et al. describe sequences (ABL63770, ABL66331, and ABL67711) which are 100% identical to SEQ ID NO: 1040 of the instant invention. GenBank describes a sequence (N69022) which is 99.8% identical to SEQ ID NO: 1247 of the instant invention. Young et al. describe a sequence (ABL63977) which is 99.8% identical to SEQ ID NO: 1247 of the instant invention.

Kinzler et al. describe measuring a gene product that is elevated over that which is normally produced by non-cancerous cells (col. 5, lines 51-54). Kinzler et al. describe these elevated expressions may be present in various tumors such as from breast, lung, brain, bladder, prostate, liver, skin, colorectal, and stomach (col. 5, lines 55-60). Kinzler et al. describe using non-cancerous cells for determining baseline expression levels (col. 5, lines 60-67). Kinzler et al. describe methods and kits for detecting elevated expression and identifying compounds which interfere with gene products (col. 3, lines 19-24).

Robinson et al. state their invention provides a means to generate and monitor gene expression profiles resulting from cellular and physiological changes that can then be characterized for individual genes or groups of genes (col. 1, lines 4-10). Robinson et al. state their invention may be used to screen drug compounds that affect biological samples (col. 16, lines 48-52). Robinson et al. state that human cancer is a result of genetic changes that result in

alterations in the profile of expressed genes (col. 1, lines 30-33). Robinson et al. note the importance of methods that can measure the expression levels of thousands of genes to monitor the progression of cancer (col. 1, lines 33-39). Robinson et al. state their invention may be used to compare normal and cancerous tissue as well as to differentiate between cancerous tissue that is metastatic and non-metastatic (col. 15, lines 61-67). Robinson et al. describe using tissues from various types of organs as seen in Table 1. Robinson et al. state that various modifications and variations can be made to their invention (col. 30, lines 13-18). Young et al. describe genes analyzed therein exhibit differential expression over control non-cancerous cells. A person of ordinary skill in the art would have been motivated to combine other sequences from various parts of the body to the screening process presented by Robinson et al. and to compare them with known non-cancerous controls as stated by Kinzler et al. and Young et al. to check for the presence of gene expression alterations involved in normal and cancerous tissue. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to test compounds on the various sequences described in the paragraph above which come from various parts of the body as well as comparing genes with known differential expression between cancerous and non-cancerous cells, as one of ordinary skill in the art would have a reasonable expectation of success to identify which compounds are effective in controlling expression and where in the body this control takes place, as stated by Robinson (col. 16, lines 48-57 and col. 22, lines 1-9 and 59-62).

Thus, Robinson et al., in view of GenBank (various Accession numbers), Young et al., and, and Kinzler et al. motivate claims 1-17, 47, and 48.

Conclusion

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center located in Crystal Mall 1. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR §1.6(d)). The CM1 Fax Center number is either (703) 308-4242 or (703) 305-3014.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carolyn Smith, whose telephone number is (703) 308-6043. The examiner can normally be reached Monday through Friday from 8 A.M. to 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, can be reached on (703) 308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instruments Examiner Tina Plunkett whose telephone number is (703) 305-3524 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

July 16, 2003

ARDIN H. MARSCHEL
PRIMARY EXAMINER

Sequence Match Listing for 09/954531

for SEQ ID NO: 110

RESULT 4
AP001082
LOCUS AP001082 130642 bp DNA linear HTG 30-MAY-2000
DEFINITION Homo sapiens chromosome 11 clone CMB9-77P23 map 11q12, WORKING DRAFT SEQUENCE, 32 unordered pieces.
ACCESSION AP001082
VERSION AP001082.3 GI:8117229
KEYWORDS HTG; HTGS_PHASE1; HTGS_DRAFT.
SOURCE Homo sapiens DNA, clone:CMB9-77P23.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 130642)
AUTHORS Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.
TITLE Homo sapiens 130,642 genomic DNA of 11q12
JOURNAL Published Only in DataBase (2000)
REFERENCE 2 (bases 1 to 130642)
AUTHORS Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P., Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.
TITLE Direct Submission
JOURNAL Submitted (25-JAN-2000) Masahira Hattori, The Institute of Physical and Chemical Research (RIKEN), Genomic Sciences Center (GSC); Kitasato Univ., 1-15-1 Kitasato, Sagamihara, Kanagawa 228-8555, Japan (E-mail:hattori@gsc.riken.go.jp, URL:http://hgp.gsc.riken.go.jp/, Tel:81-42-778-9923, Fax:81-42-778-9924)
COMMENT On May 30, 2000 this sequence version replaced gi:6997796.
---------- Genome Center
Center: RIKEN Genomic Sciences Center(GSC)
Center code: RIKEN
Web site: http://hgp.gsc.riken.go.jp/
Contact: hattori@gsc.riken.go.jp
---------- Project Information
Center project name: HumDraft11
Center clone name: CMB9-77P23
---------- Summary Statistics
Sequencing vector: PCR products; 100% of reads
Chemistry: Dye-terminator ET-amersham; 100% of reads
Assembly program: Phrap; version 0.990329
Consensus quality: 109722 bases at least Q40
Consensus quality: 118358 bases at least Q30
Consensus quality: 123353 bases at least Q20
Insert size: 127542; sum-of-contigs
Quality coverage: 4.10x in Q20 bases; sum-of-contigs
----------.
NOTE: This is a 'working draft' sequence. It currently consists of 32 contigs. The true order of the pieces is not known and their order in this sequence record is arbitrary. Gaps between the contigs are represented as runs N, but the exact sizes of the gaps are unknown. This record will be updated with the finished sequence as soon as it is available and the accession number will be preserved

1	14868	contig of	14868	bp in length
14969	24185	contig of	9217	bp in length
24286	32497	contig of	8212	bp in length
32598	39406	contig of	6809	bp in length
39507	44898	contig of	5392	bp in length
44999	50122	contig of	5124	bp in length
50223	57989	contig of	7767	bp in length
58090	64088	contig of	5999	bp in length
64189	68556	contig of	4368	bp in length
68657	72259	contig of	3603	bp in length
72360	76692	contig of	4333	bp in length
76793	80690	contig of	3898	bp in length
80791	84253	contig of	3463	bp in length
84354	88683	contig of	4330	bp in length
88784	91721	contig of	2938	bp in length
91822	95301	contig of	3480	bp in length
95402	99413	contig of	4012	bp in length
99514	103118	contig of	3605	bp in length
103219	106147	contig of	2929	bp in length
106248	109453	contig of	3206	bp in length
109554	111611	contig of	2058	bp in length
111712	113460	contig of	1749	bp in length
113561	115886	contig of	2326	bp in length
115987	118771	contig of	2785	bp in length
118872	120623	contig of	1752	bp in length
120724	122472	contig of	1749	bp in length
122573	123753	contig of	1181	bp in length
123854	124856	contig of	1003	bp in length
124957	126517	contig of	1561	bp in length
126618	128115	contig of	1498	bp in length
128216	129271	contig of	1056	bp in length
129372	130642	contig of	1271	bp in length

Sequence updated (02-FEB-2000)
Sequence updated (26-May-2000).
* NOTE: This is a 'working draft' sequence. It currently
* consists of 32 contigs. The true order of the pieces
* is not known and their order in this sequence record is
* arbitrary. Gaps between the contigs are represented as
* runs of N, but the exact sizes of the gaps are unknown.
* This record will be updated with the finished sequence
* as soon as it is available and the accession number will
* be preserved.
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* 24186 24285: gap of 100 bp
* 24286 32497: contig of 8212 bp in length
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* 32598 39406: contig of 6809 bp in length
* 39407 39506: gap of 100 bp
* 39507 44898: contig of 5392 bp in length
* 44899 44998: gap of 100 bp
* 44999 50122: contig of 5124 bp in length
* 50123 50222: gap of 100 bp
* 50223 57989: contig of 7767 bp in length
* 57990 58089: gap of 100 bp
* 58090 64088: contig of 5999 bp in length
* 64089 64188: gap of 100 bp
* 64189 68556: contig of 4368 bp in length
* 68557 68656: gap of 100 bp
* 68657 72259: contig of 3603 bp in length
* 72260 72359: gap of 100 bp
* 72360 76692: contig of 4333 bp in length
* 76693 76792: gap of 100 bp
* 76793 80690: contig of 3898 bp in length
* 80691 80790: gap of 100 bp
* 80791 84253: contig of 3463 bp in length
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            *    95302 95401: gap of      100 bp
            *    95402    99413: contig of 4012 bp in length
            *    99414 99513: gap of      100 bp
            *    99514   103118: contig of 3605 bp in length
            *   103119 103218: gap of      100 bp
            *   103219   106147: contig of 2929 bp in length
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            *   109554   111611: contig of 2058 bp in length
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            *   115887 115986: gap of      100 bp
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     misc_feature    103219. .106147

  Query Match             100.0%;  Score 382;  DB 2;  Length 130642;
  Best Local Similarity   100.0%;  Pred. No. 8.2e-75;
  Matches  382;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AATTCTTTTTTAGCTCATTGGCTATCCTTAGCGTACATTATGTATGGCCCAACACAATTC 60
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Qy         61 TTCTTCCACTGTAGCCCAGGGAAGCCAAAAGATTGGACACTCTTGTTTTAAATAGACTAT 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      58906 TTCTTCCACTGTAGCCCAGGGAAGCCAAAAGATTGGACACTCTTGTTTTAAATAGACTAT 58965

Qy        121 CTTTTTACCCTTTTATTTGTTCCAACTCAGGATAAATATCCAAGTATCTAGAGGGTCTAT 180
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Db      58966 CTTTTTACCCTTTTATTTGTTCCAACTCAGGATAAATATCCAAGTATCTAGAGGGTCTAT 59025

Qy        181 GTGTGCTATCTATACAATAAAAGATAGTTATATAAAAATGAAGAGTTCTCCATACCATTA 240
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Qy        241 TATAAACAGGAGGTTTTACAGGCATTAGTGATACTCTGTTGGACTCAATGGGTTTTTTTC 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db      59086 TATAAACAGGAGGTTTTACAGGCATTAGTGATACTCTGTTGGACTCAATGGGTTTTTTTC 59145

Qy        301 TCTCTTATAGCTATGAAAGACTTTATGCCAGTCCAAAATATACAATGTTGAAAGACAGGT 360
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Db      59146 TCTCTTATAGCTATGAAAGACTTTATGCCAGTCCAAAATATACAATGTTGAAAGACAGGT 59205

Qy        361 TTTGAAATAAATATTCTCCCCA 382
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Db      59206 TTTGAAATAAATATTCTCCCCA 59227


RESULT 5
AP000727
LOCUS       AP000727               153394 bp    DNA     linear   HTG 30-MAY-2000
DEFINITION  Homo sapiens chromosome 11 clone RP11-679G21 map 11q12, WORKING
            DRAFT SEQUENCE, 40 unordered pieces.
ACCESSION   AP000727
VERSION     AP000727.2  GI:8118896
KEYWORDS    HTG; HTGS_PHASE1; HTGS_DRAFT.
SOURCE      Homo sapiens DNA, clone:RP11-679G21.
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 153394)
  AUTHORS   Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P.,
            Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.
  TITLE     Homo sapiens 153,394 genomic DNA of 11q12
  JOURNAL   Published Only in DataBase (1999)
REFERENCE   2  (bases 1 to 153394)
  AUTHORS   Hattori,M., Ishii,K., Toyoda,A., Taylor,T.D., Hong-Seog,P.,
            Fujiyama,A., Yada,T., Totoki,Y., Watanabe,H. and Sakaki,Y.
  TITLE     Direct Submission
  JOURNAL   Submitted (16-NOV-1999) Masahira Hattori, The Institute of Physical
            and Chemical Research (RIKEN), Genomic Sciences Center (GSC);
            Kitasato Univ., 1-15-1 Kitasato, Sagamihara, Kanagawa 228-8555,
            Japan (E-mail:hattori@gsc.riken.go.jp,
            URL:http://hgp.gsc.riken.go.jp/, Tel:81-42-778-9923,
            Fax:81-42-778-9924)
COMMENT     On May 31, 2000 this sequence version replaced gi:6997582.
            -------------- Genome Center
                Center: RIKEN Genomic Sciences Center(GSC)
                Center code: RIKEN
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    Web site: http://hgp.gsc.riken.go.jp/
    Contact: hattori@gsc.riken.go.jp
---------- Project Information
    Center project name: HumDraft11
    Center clone name: RP11-679G21
---------- Summary Statistics
    Sequencing vector: PCR products; 100% of reads
    Chemistry: Dye-terminator ET-amersham; 100% of reads
    Assembly program: Phrap; version 0.990329
    Consensus quality: 133607 bases at least Q40
    Consensus quality: 142217 bases at least Q30
    Consensus quality: 146720 bases at least Q20
    Insert size: 149494; sum-of-contigs
    Quality coverage: 4.03x in Q20 bases; sum-of-contigs
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NOTE: This is a 'working draft' sequence. It currently consists of
40 contigs. The true order of the pieces is not known and their
order in this sequence record is arbitrary. Gaps between the
contigs are represented as runs N, but the exact sizes of the gaps
are unknown. This record will be updated with the finished sequence
as soon as it is available and the accession number will be
preserved
         1     11871 contig of  11871 bp in length
     11972     22347 contig of  10376 bp in length
     22448     33540 contig of  11093 bp in length
     33641     41577 contig of   7937 bp in length
     41678     45975 contig of   4298 bp in length
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     53228     60314 contig of   7087 bp in length
     60415     65544 contig of   5130 bp in length
     65645     71027 contig of   5383 bp in length
     71128     75422 contig of   4295 bp in length
     75523     79274 contig of   3752 bp in length
     79375     84398 contig of   5024 bp in length
     84499     88990 contig of   4492 bp in length
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     93537     96655 contig of   3119 bp in length
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    109462    112303 contig of   2842 bp in length
    112404    115484 contig of   3081 bp in length
    115585    118972 contig of   3388 bp in length
    119073    121620 contig of   2548 bp in length
    121721    124322 contig of   2602 bp in length
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    127189    130306 contig of   3118 bp in length
    130407    131809 contig of   1403 bp in length
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    136210    137539 contig of   1330 bp in length
    137640    139390 contig of   1751 bp in length
    139491    140939 contig of   1449 bp in length
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    149103    150523 contig of   1421 bp in length
    150624    152235 contig of   1612 bp in length
    152336    153394 contig of   1059 bp in length
Sequence updated (26-May-2000).
* NOTE: This is a 'working draft' sequence. It currently
* consists of 40 contigs. The true order of the pieces
* is not known and their order in this sequence record is
* arbitrary. Gaps between the contigs are represented as
* runs of N, but the exact sizes of the gaps are unknown.
* This record will be updated with the finished sequence
* as soon as it is available and the accession number will
* be preserved.
*         1    11871: contig of 11871 bp in length
*     11872 11971: gap of      100 bp
*     11972    22347: contig of 10376 bp in length
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*     33641    41577: contig of 7937 bp in length
*     41578 41677: gap of      100 bp
*     41678    45975: contig of 4298 bp in length
*     45976 46075: gap of      100 bp
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*     53128 53227: gap of      100 bp
*     53228    60314: contig of 7087 bp in length
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*    136210   137539: contig of 1330 bp in length
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*    139491   140939: contig of 1449 bp in length
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*    142594   144234: contig of 1641 bp in length
*    144235 144334: gap of      100 bp
*    144335   145850: contig of 1516 bp in length
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Qy         61 TTCTTCCACTGTAGCCCAGGGAAGCCAAAAGATTGGACACTCTTGTTTTAAATAGACTAT 120
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Qy        121 CTTTTTACCCTTTTATTTGTTCCAACTCAGGATAAATATCCAAGTATCTAGAGGGTCTAT 180
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Qy        361 TTTGAAATAAATATTCTCCCCA 382
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ALIGNMENTS

for SEQ ID NO: 110

RESULT 1
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ACCESSION AA485973
VERSION AA485973.1 GI:2215124
KEYWORDS EST.
SOURCE human.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 382)
AUTHORS Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.
TITLE WashU-NCI human EST Project
JOURNAL Unpublished (1997)
COMMENT Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 967 Std Error: 0.00

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            High quality sequence stop: 262.
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                      /sex="male"
                      /dev_stage="72 years"
                      /lab_host="SOLR cells (kanamycin resistant)"
                      /note="Organ: lung; Vector: pBluescript SK-; Site_1: EcoRI
                      ; Site_2: XhoI; Cloned unidirectionally.  Primer: Oligo
                      dT. normal lung.  Average insert size: 1.0 kb; Uni-ZAP XR
                      Vector; ~5' adaptor sequence: 5' GAATTCGGCACGAG 3' ~3'
                      adaptor sequence: 5' CTCGAGTTTTTTTTTTTTTTTT 3'"
BASE COUNT       119 a      70 c      60 g     133 t
ORIGIN

  Query Match             100.0%;  Score 382;  DB 9;  Length 382;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-79;
  Matches  382;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AATTCTTTTTTAGCTCATTGGCTATCCTTAGCGTACATTATGTATGGCCCAACACAATTC 60
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Qy         61 TTCTTCCACTGTAGCCCAGGGAAGCCAAAAGATTGGACACTCTTGTTTTAAATAGACTAT 120
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Qy        121 CTTTTTACCCTTTTATTTGTTCCAACTCAGGATAAATATCCAAGTATCTAGAGGGTCTAT 180
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Db        121 CTTTTTACCCTTTTATTTGTTCCAACTCAGGATAAATATCCAAGTATCTAGAGGGTCTAT 180

Qy        181 GTGTGCTATCTATACAATAAAAGATAGTTATATAAAAATGAAGAGTTCTCCATACCATTA 240
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Db        181 GTGTGCTATCTATACAATAAAAGATAGTTATATAAAAATGAAGAGTTCTCCATACCATTA 240

Qy        241 TATAAACAGGAGGTTTTACAGGCATTAGTGATACTCTGTTGGACTCAATGGGTTTTTTTC 300
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Db        241 TATAAACAGGAGGTTTTACAGGCATTAGTGATACTCTGTTGGACTCAATGGGTTTTTTTC 300

Qy        301 TCTCTTATAGCTATGAAAGACTTTATGCCAGTCCAAAATATACAATGTTGAAAGACAGGT 360
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Db        301 TCTCTTATAGCTATGAAAGACTTTATGCCAGTCCAAAATATACAATGTTGAAAGACAGGT 360

Qy        361 TTTGAAATAAATATTCTCCCCA 382
              |||||||||||||||||||||
Db        361 TTTGAAATAAATATTCTCCCCA 382


RESULT 2
AA968812
LOCUS       AA968812                409 bp    mRNA    linear   EST 17-JUN-1998
DEFINITION  oo54g01.s1 NCI_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1570032 3'
            similar to contains MER30.t3 MER30 repetitive element ;, mRNA
            sequence.
ACCESSION   AA968812
VERSION     AA968812.1  GI:3143992
KEYWORDS    EST.
SOURCE      human.
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1  (bases 1 to 409)
  AUTHORS   NCI-CGAP http://www.ncbi.nlm.nih.gov/ncicgap.
  TITLE     National Cancer Institute, Cancer Genome Anatomy Project (CGAP),
            Tumor Gene Index
  JOURNAL   Unpublished (1997)
COMMENT     Contact: Robert Strausberg, Ph.D.
            Email: cgapbs-r@mail.nih.gov
            Tissue Procurement: Christopher Moskaluk, M.D., Ph.D., Michael R.
            Emmert-Buck, M.D., Ph.D.
            cDNA Library Preparation: M. Bento Soares, Ph.D.
            cDNA Library Arrayed by: Greg Lennon, Ph.D.
            DNA Sequencing by: Washington University Genome Sequencing Center
            Clone distribution: NCI-CGAP clone distribution information can be
            found through the I.M.A.G.E. Consortium/LLNL at:
            www-bio.llnl.gov/bbrp/image/image.html
            Insert Length: 918    Std Error: 0.00
            Seq primer: -40m13 fwd. ET from Amersham.
FEATURES              Location/Qualifiers
     source           1. .409
                      /organism="Homo sapiens"
                      /db_xref="taxon:9606"
                      /clone="IMAGE:1570032"
                      /clone_lib="NCI_CGAP_Lu5"
                      /tissue_type="carcinoid"
                      /lab_host="DH10B"
                      /note="Organ: lung; Vector: pT7T3D-Pac (Pharmacia) with a
                      modified polylinker; 1st strand cDNA was prepared from
                      neuroendocrine lung carcinoid, and was then primed with a
                      Not I - oligo(dT) primer. Double-stranded cDNA was ligated
                      to Eco RI adaptors (Pharmacia), digested with Not I and
                      cloned into the Not I and Eco RI sites of the modified
                      pT7T3 vector.  Library is normalized. Library was
                      constructed by Bento Soares and M. Fatima Bonaldo. "
BASE COUNT       124 a      84 c      61 g     140 t
ORIGIN

  Query Match             100.0%;  Score 382;  DB 9;  Length 409;
  Best Local Similarity   100.0%;  Pred. No. 1.1e-79;
  Matches  382;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 AATTCTTTTTTAGCTCATTGGCTATCCTTAGCGTACATTATGTATGGCCCAACACAATTC 60
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Db          6 AATTCTTTTTTAGCTCATTGGCTATCCTTAGCGTACATTATGTATGGCCCAACACAATTC 65

Qy         61 TTCTTCCACTGTAGCCCAGGGAAGCCAAAAGATTGGACACTCTTGTTTTAAATAGACTAT 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         66 TTCTTCCACTGTAGCCCAGGGAAGCCAAAAGATTGGACACTCTTGTTTTAAATAGACTAT 125

Qy        121 CTTTTTACCCTTTTATTTGTTCCAACTCAGGATAAATATCCAAGTATCTAGAGGGTCTAT 180
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Db        126 CTTTTTACCCTTTTATTTGTTCCAACTCAGGATAAATATCCAAGTATCTAGAGGGTCTAT 185

Qy        181 GTGTGCTATCTATACAATAAAAGATAGTTATATAAAAATGAAGAGTTCTCCATACCATTA 240
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Db        186 GTGTGCTATCTATACAATAAAAGATAGTTATATAAAAATGAAGAGTTCTCCATACCATTA 245

Qy        241 TATAAACAGGAGGTTTTACAGGCATTAGTGATACTCTGTTGGACTCAATGGGTTTTTTTC 300
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Db        246 TATAAACAGGAGGTTTTACAGGCATTAGTGATACTCTGTTGGACTCAATGGGTTTTTTTC 305

Qy        301 TCTCTTATAGCTATGAAAGACTTTATGCCAGTCCAAAATATACAATGTTGAAAGACAGGT 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        306 TCTCTTATAGCTATGAAAGACTTTATGCCAGTCCAAAATATACAATGTTGAAAGACAGGT 365

Qy        361 TTTGAAATAAATATTCTCCCCA 382
              |||||||||||||||||||||
Db        366 TTTGAAATAAATATTCTCCCCA 387
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ALIGNMENTS

for SEQ ID NO: 110

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RESULT 1
ABL62840
ID   ABL62840 standard; DNA; 382 BP.
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AC   ABL62840;
XX
DT   15-MAY-2002  (first entry)
XX
DE   Breast cancer related gene sequence SEQ ID NO:1177.
XX
KW   Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW   stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW   cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW   gene; ds.
XX
OS   Homo sapiens.
XX
PN   WO200194629-A2.
XX
PD   13-DEC-2001.
XX
PF   30-MAY-2001; 2001WO-US10838.
XX
PR   05-JUN-2000; 2000US-209473P.
PR   05-JUN-2000; 2000US-209531P.
PR   18-SEP-2000; 2000US-233133P.
PR   18-SEP-2000; 2000US-233617P.
PR   20-SEP-2000; 2000US-234009P.
PR   20-SEP-2000; 2000US-234034P.
PR   20-SEP-2000; 2000US-234052P.
PR   22-SEP-2000; 2000US-234509P.
PR   22-SEP-2000; 2000US-234567P.
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PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
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PR 02-OCT-2000; 2000US-237172P.
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PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 1177; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 382 BP; 119 A; 70 C; 60 G; 133 T; 0 other;

Query Match 100.0%; Score 382; DB 24; Length 382;
Best Local Similarity 100.0%; Pred. No. 9e-87;
Matches 382; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 AATTCTTTTTTAGCTCATTGGCTATCCTTAGCGTACATTATGTATGGCCCAACACAATTC 60
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Db 1 AATTCTTTTTTAGCTCATTGGCTATCCTTAGCGTACATTATGTATGGCCCAACACAATTC 60

Qy 61 TTCTTCCACTGTAGCCCAGGGAAGCCAAAAGATTGGACACTCTTGTTTTAAATAGACTAT 120
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Qy 121 CTTTTTACCCTTTTATTTGTTCCAACTCAGGATAAATATCCAAGTATCTAGAGGGTCTAT 180
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Db 121 CTTTTTACCCTTTTATTTGTTCCAACTCAGGATAAATATCCAAGTATCTAGAGGGTCTAT 180

Qy 181 GTGTGCTATCTATACAATAAAAGATAGTTATATAAAAATGAAGAGTTCTCCATACCATTA 240
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Db 181 GTGTGCTATCTATACAATAAAAGATAGTTATATAAAAATGAAGAGTTCTCCATACCATTA 240

Qy 241 TATAAACAGGAGGTTTTACAGGCATTAGTGATACTCTGTTGGACTCAATGGGTTTTTTTC 300
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Db 241 TATAAACAGGAGGTTTTACAGGCATTAGTGATACTCTGTTGGACTCAATGGGTTTTTTTC 300

Qy 301 TCTCTTATAGCTATGAAAGACTTTATGCCAGTCCAAAATATACAATGTTGAAAGACAGGT 360
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Db 301 TCTCTTATAGCTATGAAAGACTTTATGCCAGTCCAAAATATACAATGTTGAAAGACAGGT 360

Qy 361 TTTGAAATAAATATTCTCCCCA 382
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Db 361 TTTGAAATAAATATTCTCCCCA 382

RESULT 2
ABL63054
ID ABL63054 standard; DNA; 382 BP.
XX
AC ABL63054;
XX
DT 15-MAY-2002 (first entry)
XX
DE Breast cancer related gene sequence SEQ ID NO:1391.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.
PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.

PR 28-SEP-2000; 2000US-236033P.
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PR 02-OCT-2000; 2000US-237172P.
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PR 02-OCT-2000; 2000US-237294P.
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PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 1391; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 382 BP; 119 A; 70 C; 60 G; 133 T; 0 other;

Query Match 100.0%; Score 382; DB 24; Length 382;
Best Local Similarity 100.0%; Pred. No. 9e-87;
Matches 382; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 AATTCTTTTTTAGCTCATTGGCTATCCTTAGCGTACATTATGTATGGCCCAACACAATTC 60
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Qy         61 TTCTTCCACTGTAGCCCAGGGAAGCCAAAAGATTGGACACTCTTGTTTTAAATAGACTAT 120
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Qy        121 CTTTTTACCCTTTTATTTGTTCCAACTCAGGATAAATATCCAAGTATCTAGAGGGTCTAT 180
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Db        121 CTTTTTACCCTTTTATTTGTTCCAACTCAGGATAAATATCCAAGTATCTAGAGGGTCTAT 180

Qy        181 GTGTGCTATCTATACAATAAAAGATAGTTATATAAAAATGAAGAGTTCTCCATACCATTA 240
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Db        181 GTGTGCTATCTATACAATAAAAGATAGTTATATAAAAATGAAGAGTTCTCCATACCATTA 240

Qy        241 TATAAACAGGAGGTTTTACAGGCATTAGTGATACTCTGTTGGACTCAATGGGTTTTTTTC 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 TATAAACAGGAGGTTTTACAGGCATTAGTGATACTCTGTTGGACTCAATGGGTTTTTTTC 300

Qy        301 TCTCTTATAGCTATGAAAGACTTTATGCCAGTCCAAAATATACAATGTTGAAAGACAGGT 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TCTCTTATAGCTATGAAAGACTTTATGCCAGTCCAAAATATACAATGTTGAAAGACAGGT 360

Qy        361 TTTGAAATAAATATTCTCCCCA 382
              |||||||||||||||||||||
Db        361 TTTGAAATAAATATTCTCCCCA 382
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for SEQ ID NO:653

RESULT 2
ABL63383
ID ABL63383 standard; DNA; 378 BP.
XX
AC ABL63383;
XX
DT 15-MAY-2002 (first entry)
XX
Breast cancer related gene sequence SEQ ID NO:1720.

KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.
PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.
PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 1720; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)

```
CC   comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC   to ABL70110), or is at least 95% identical to (S), where a change in
CC   expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC   activity and can be used in gene therapy. M1 can be used for screening
CC   an anti-neoplastic agent, and can be used for producing a product which
CC   is the data collected with respect to the anti-neoplastic agent as a
CC   result of M1, and the data is sufficient to convey the chemical
CC   structure and/or properties of the agent. M1 can be used in the
CC   treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC   oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC   adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC   infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC   carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ   Sequence 378 BP; 150 A; 41 C; 40 G; 147 T; 0 other;

  Query Match             100.0%;  Score 378;  DB 24;  Length 378;
  Best Local Similarity   100.0%;  Pred. No. 3.2e-48;
  Matches  378;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 TTTTTTTTTTTTTTTTTGGTCATACTACATTTCACTTTATTATTATTAACATTTATCATA 60
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Qy         61 CATGGTTACTATTCCAATCTTTCATGCAGACAAAAATAAACAATATAAAATACATAATGC 120
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Qy        121 ACTTTGATAATTTTAACCATACATAAAATATGGAGTAATGGAAGCTATGTTACATGGATA 180
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Qy        181 TTTTACAAAGGAAAAAAAGATGACTTTTATAATAACACATCCAGATGAAATTTATCATTA 240
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Db        181 TTTTACAAAGGAAAAAAAGATGACTTTTATAATAACACATCCAGATGAAATTTATCATTA 240

Qy        241 AATTTTGGATTTCATATGATGTTAAGTATGGATATATTCAAAACAATTACTATTTATAGA 300
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Db        241 AATTTTGGATTTCATATGATGTTAAGTATGGATATATTCAAAACAATTACTATTTATAGA 300

Qy        301 ACCAATTTGATATTTTGTCATTTAAAATAATGAATACTATGTAAATGAGTACTTATAAAA 360
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Db        301 ACCAATTTGATATTTTGTCATTTAAAATAATGAATACTATGTAAATGAGTACTTATAAAA 360

Qy        361 ATATTTTTAGGCAAAAAG 378
              ||||||||||||||||||
Db        361 ATATTTTTAGGCAAAAAG 378


RESULT 3
ABL64857
ID   ABL64857 standard; DNA; 378 BP.
XX
AC   ABL64857;
XX
DT   15-MAY-2002  (first entry)
XX
DE   Lung cancer related gene sequence SEQ ID NO:3194.
XX
KW   Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW   stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW   cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW   gene; ds.
XX
OS   Homo sapiens.
XX
PN   WO200194629-A2.
XX
PD   13-DEC-2001.
XX
PF   30-MAY-2001; 2001WO-US10838.
XX
PR   05-JUN-2000; 2000US-209473P.
PR   05-JUN-2000; 2000US-209531P.
PR   18-SEP-2000; 2000US-233133P.
PR   18-SEP-2000; 2000US-233617P.
PR   20-SEP-2000; 2000US-234009P.
PR   20-SEP-2000; 2000US-234034P.
PR   20-SEP-2000; 2000US-234052P.
PR   22-SEP-2000; 2000US-234509P.
PR   22-SEP-2000; 2000US-234567P.
PR   25-SEP-2000; 2000US-234923P.
PR   25-SEP-2000; 2000US-234924P.
PR   25-SEP-2000; 2000US-235077P.
PR   25-SEP-2000; 2000US-235082P.
PR   25-SEP-2000; 2000US-235134P.
PR   25-SEP-2000; 2000US-235280P.
PR   26-SEP-2000; 2000US-235637P.
PR   26-SEP-2000; 2000US-235638P.
PR   27-SEP-2000; 2000US-235711P.
PR   27-SEP-2000; 2000US-235720P.
PR   27-SEP-2000; 2000US-235840P.
PR   27-SEP-2000; 2000US-235863P.
PR   28-SEP-2000; 2000US-236028P.
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PR   28-SEP-2000; 2000US-236034P.
PR   28-SEP-2000; 2000US-236109P.
PR   28-SEP-2000; 2000US-236111P.
PR   29-SEP-2000; 2000US-236842P.
PR   29-SEP-2000; 2000US-236891P.
PR   02-OCT-2000; 2000US-237172P.
PR   02-OCT-2000; 2000US-237173P.
PR   02-OCT-2000; 2000US-237278P.
PR   02-OCT-2000; 2000US-237294P.
PR   02-OCT-2000; 2000US-237295P.
PR   02-OCT-2000; 2000US-237316P.
PR   03-OCT-2000; 2000US-237425P.
PR   03-OCT-2000; 2000US-237598P.
PR   03-OCT-2000; 2000US-237604P.
PR   03-OCT-2000; 2000US-237606P.
PR   03-OCT-2000; 2000US-237608P.
PR   01-NOV-2000; 2000US-244867P.
PR   01-NOV-2000; 2000US-245084P.
XX
PA   (AVAL-) AVALON PHARM.
XX
PI   Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI   Soppet DR, Weaver Z;
XX
DR   WPI; 2002-188264/24.
XX
PT   Screening for anti-neoplastic agent involves exposing cells to a
PT   chemical agent to be tested for anti-neoplastic activity, and
PT   determining a change in expression of a gene of a signature gene set -
XX
PS   Claim 1; SEQ ID 3194; 44pp; English.
XX
CC   The present invention describes a method (M1) for screening for an
CC   anti-neoplastic agent. The method involves exposing cells to a chemical
CC   agent to be tested for anti-neoplastic activity, determining a change in
CC   expression of at least one gene (I) of a signature gene set, where (I)
CC   comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC   to ABL70110), or is at least 95% identical to (S), where a change in
CC   expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC   activity and can be used in gene therapy. M1 can be used for screening
CC   an anti-neoplastic agent, and can be used for producing a product which
CC   is the data collected with respect to the anti-neoplastic agent as a
CC   result of M1, and the data is sufficient to convey the chemical
CC   structure and/or properties of the agent. M1 can be used in the
CC   treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC   oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC   adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC   infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC   carcinoma, papillary carcinoma and Wilm's tumour.
XX
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SQ Sequence 378 BP; 150 A; 41 C; 40 G; 147 T; 0 other;

Query Match 100.0%; Score 378; DB 24; Length 378;
Best Local Similarity 100.0%; Pred. No. 3.2e-48;
Matches 378; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 TTTTTTTTTTTTTTTTTGGTCATACTACATTTCACTTTATTATTATTAACATTTATCATA 60

Qy         61 CATGGTTACTATTCCAATCTTTCATGCAGACAAAAATAAACAATATAAAATACATAATGC 120
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Db         61 CATGGTTACTATTCCAATCTTTCATGCAGACAAAAATAAACAATATAAAATACATAATGC 120

Qy        121 ACTTTGATAATTTTAACCATACATAAAATATGGAGTAATGGAAGCTATGTTACATGGATA 180
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Db        121 ACTTTGATAATTTTAACCATACATAAAATATGGAGTAATGGAAGCTATGTTACATGGATA 180

Qy        181 TTTTACAAAGGAAAAAAAGATGACTTTTATAATAACACATCCAGATGAAATTTATCATTA 240
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Db        181 TTTTACAAAGGAAAAAAAGATGACTTTTATAATAACACATCCAGATGAAATTTATCATTA 240

Qy        241 AATTTTGGATTTCATATGATGTTAAGTATGGATATATTCAAAACAATTACTATTTATAGA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 AATTTTGGATTTCATATGATGTTAAGTATGGATATATTCAAAACAATTACTATTTATAGA 300

Qy        301 ACCAATTTGATATTTTGTCATTTAAAATAATGAATACTATGTAAATGAGTACTTATAAAA 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 ACCAATTTGATATTTTGTCATTTAAAATAATGAATACTATGTAAATGAGTACTTATAAAA 360

Qy        361 ATATTTTTAGGCAAAAAG 378
              ||||||||||||||||||
Db        361 ATATTTTTAGGCAAAAAG 378
```

RESULT 4
ABL65548
ID ABL65548 standard; DNA; 378 BP.
XX
AC ABL65548;
XX
DT 15-MAY-2002 (first entry)
XX
DE Lung cancer related gene sequence SEQ ID NO:3885.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.
PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.
PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 3885; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 378 BP; 150 A; 41 C; 40 G; 147 T; 0 other;

Query Match 100.0%; Score 378; DB 24; Length 378;
Best Local Similarity 100.0%; Pred. No. 3.2e-48;
Matches 378; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TTTTTTTTTTTTTTTTTGGTCATACTACATTTCACTTTATTATTATTAACATTTATCATA 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 TTTTTTTTTTTTTTTTTGGTCATACTACATTTCACTTTATTATTATTAACATTTATCATA 60

Qy         61 CATGGTTACTATTCCAATCTTTCATGCAGACAAAAATAAACAATATAAAATACATAATGC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 CATGGTTACTATTCCAATCTTTCATGCAGACAAAAATAAACAATATAAAATACATAATGC 120
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```
Qy        121 ACTTTGATAATTTTAACCATACATAAAATATGGAGTAATGGAAGCTATGTTACATGGATA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 ACTTTGATAATTTTAACCATACATAAAATATGGAGTAATGGAAGCTATGTTACATGGATA 180

Qy        181 TTTTACAAAGGAAAAAAAGATGACTTTTATAATAACACATCCAGATGAAATTTATCATTA 240
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Qy        241 AATTTTGGATTTCATATGATGTTAAGTATGGATATATTCAAAACAATTACTATTTATAGA 300
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Db        241 AATTTTGGATTTCATATGATGTTAAGTATGGATATATTCAAAACAATTACTATTTATAGA 300

Qy        301 ACCAATTTGATATTTTGTCATTTAAAATAATGAATACTATGTAAATGAGTACTTATAAAA 360
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Db        301 ACCAATTTGATATTTTGTCATTTAAAATAATGAATACTATGTAAATGAGTACTTATAAAA 360

Qy        361 ATATTTTTAGGCAAAAAG 378
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Db        361 ATATTTTTAGGCAAAAAG 378
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RESULT 5
ABL66020
ID ABL66020 standard; DNA; 378 BP.
XX
AC ABL66020;
XX
DT 15-MAY-2002 (first entry)
XX
DE Lung cancer related gene sequence SEQ ID NO:4357.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.
PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
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PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
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PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 4357; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 378 BP; 150 A; 41 C; 40 G; 147 T; 0 other;

Query Match 100.0%; Score 378; DB 24; Length 378;
Best Local Similarity 100.0%; Pred. No. 3.2e-48;
Matches 378; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy         61 CATGGTTACTATTCCAATCTTTCATGCAGACAAAAATAAACAATATAAAATACATAATGC 120
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Db         61 CATGGTTACTATTCCAATCTTTCATGCAGACAAAAATAAACAATATAAAATACATAATGC 120

Qy        121 ACTTTGATAATTTTAACCATACATAAAATATGGAGTAATGGAAGCTATGTTACATGGATA 180
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Db        121 ACTTTGATAATTTTAACCATACATAAAATATGGAGTAATGGAAGCTATGTTACATGGATA 180

Qy        181 TTTTACAAAGGAAAAAAAGATGACTTTTATAATAACACATCCAGATGAAATTTATCATTA 240
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Db        241 AATTTTGGATTTCATATGATGTTAAGTATGGATATATTCAAAACAATTACTATTTATAGA 300

Qy        301 ACCAATTTGATATTTTGTCATTTAAAATAATGAATACTATGTAAATGAGTACTTATAAAA 360
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Db        301 ACCAATTTGATATTTTGTCATTTAAAATAATGAATACTATGTAAATGAGTACTTATAAAA 360

Qy        361 ATATTTTTAGGCAAAAAG 378
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for SEQ ID NO: 653

RESULT 1
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LOCUS AA478962 378 bp mRNA linear EST 08-AUG-1997
DEFINITION zv18d05.s1 Soares_NhHMPu_S1 Homo sapiens cDNA clone IMAGE:753993 3', mRNA sequence.
ACCESSION AA478962
VERSION AA478962.1 GI:2207596
KEYWORDS EST.
SOURCE human.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 378)
AUTHORS Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.
TITLE WashU-Merck EST Project 1997
JOURNAL Unpublished (1997)
COMMENT Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: -41m13 fwd. ET from Amersham
High quality sequence stop: 249.

FEATURES Location/Qualifiers
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/db_xref="GDB:5976866"
/db_xref="taxon:9606"
/clone="IMAGE:753993"
/clone_lib="Soares_NhHMPu_S1"
/tissue_type="Pooled human melanocyte, fetal heart, and pregnant uterus"
/lab_host="DH10B"
/note="Organ: mixed (see below); Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; Equal amounts of plasmid DNA from three normalized libraries (melanocyte 2NbHM, pregnant uterus NbHPU, and fetal heart NbHH19W) were mixed, and ss circles were made in vitro. Following HAP purification, this DNA was used as tracer in a subtractive hybridization reaction. The driver was PCR-amplified cDNAs from pools of 5,000 clones made from the same 3 libraries. The pools consisted of I.M.A.G.E. clones 260232-265223, 340488-345479, and 484488-489479."
BASE COUNT 150 a 41 c 40 g 147 t
ORIGIN

Query Match 100.0%; Score 378; DB 9; Length 378;
Best Local Similarity 100.0%; Pred. No. 2.9e-42;
Matches 378; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 TTTTTTTTTTTTTTTTTGGTCATACTACATTTCACTTTATTATTATTAACATTTATCATA 60

Qy         61 CATGGTTACTATTCCAATCTTTCATGCAGACAAAAATAAACAATATAAAATACATAATGC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 CATGGTTACTATTCCAATCTTTCATGCAGACAAAAATAAACAATATAAAATACATAATGC 120

Qy        121 ACTTTGATAATTTTAACCATACATAAAATATGGAGTAATGGAAGCTATGTTACATGGATA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 ACTTTGATAATTTTAACCATACATAAAATATGGAGTAATGGAAGCTATGTTACATGGATA 180

Qy        181 TTTTACAAAGGAAAAAAAGATGACTTTTATAATAACACATCCAGATGAAATTTATCATTA 240
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Db        181 TTTTACAAAGGAAAAAAAGATGACTTTTATAATAACACATCCAGATGAAATTTATCATTA 240

Qy        241 AATTTTGGATTTCATATGATGTTAAGTATGGATATATTCAAAACAATTACTATTTATAGA 300
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Db        241 AATTTTGGATTTCATATGATGTTAAGTATGGATATATTCAAAACAATTACTATTTATAGA 300

Qy        301 ACCAATTTGATATTTTGTCATTTAAAATAATGAATACTATGTAAATGAGTACTTATAAAA 360
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Db        301 ACCAATTTGATATTTTGTCATTTAAAATAATGAATACTATGTAAATGAGTACTTATAAAA 360

Qy        361 ATATTTTTAGGCAAAAAG 378
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Db        361 ATATTTTTAGGCAAAAAG 378
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for SEQ ID NO: 683

RESULT 1
N64489
LOCUS N64489 438 bp mRNA linear EST 01-MAR-1996
DEFINITION yz90e07.s1 Soares_multiple_sclerosis_2NbHMSP Homo sapiens cDNA clone IMAGE:290340 3', mRNA sequence.
ACCESSION N64489
VERSION N64489.1 GI:1212318
KEYWORDS EST.
SOURCE human.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 438)
AUTHORS Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and Wilson,R.
TITLE The WashU-Merck EST Project
JOURNAL Unpublished (1995)
COMMENT Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: m13 -40 forward
High quality sequence stop: 416.

FEATURES Location/Qualifiers
source 1. .438
/organism="Homo sapiens"
/db_xref="GDB:3906180"
/db_xref="taxon:9606"
/clone="IMAGE:290340"
/clone_lib="Soares_multiple_sclerosis_2NbHMSP"
/sex="male"
/tissue_type="multiple sclerosis lesions"
/dev_stage="Age 46"
/lab_host="DH10B (ampicillin resistant)"
/note="Vector: pT7T3D (Pharmacia) with a modified polylinker V_TYPE: phagemid; Site_1: Not I; Site_2: Eco RI ; 1st strand cDNA was primed with a Not I - oligo(dT) primer [5' TGTTACCAATCTGAAGTGGGAGCGGCCGCATTTTTTTTTTTTTTTTTT 3'], double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT7T3 vector (Pharmacia). Library went through one round of normalization to a Cot = 5. Library constructed by Bento Soares and M.Fatima Bonaldo. RNA from 4 multiple sclerosis lesions from one patient was kindly provided by Dr. Kevin G. Becker (NINDS/NIH). "
BASE COUNT 155 a 74 c 69 g 140 t
ORIGIN

Query Match 100.0%; Score 438; DB 14; Length 438;
Best Local Similarity 100.0%; Pred. No. 8.2e-73;
Matches 438; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 GATTAACTATGTGACTAAATTATATTCAAATTTTATGAACAGAAAATGATATAAATGTTA 60
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Db          1 GATTAACTATGTGACTAAATTATATTCAAATTTTATGAACAGAAAATGATATAAATGTTA 60

Qy         61 TCAGCTAATAAAGAGATTATCAAAGAGTAAGCAACCAAAACAAGTAGGCAAAAAGCATCA 120
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Db         61 TCAGCTAATAAAGAGATTATCAAAGAGTAAGCAACCAAAACAAGTAGGCAAAAAGCATCA 120

Qy        121 GAGAGTAATTAATACAAAGATGATGTTGTTTTTCTGGATTTCATAATGTTTATCATAGTT 180
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Db        121 GAGAGTAATTAATACAAAGATGATGTTGTTTTTCTGGATTTCATAATGTTTATCATAGTT 180

Qy        181 GTCAACTTTTCTCATTCAAAAAAACCCTTATTTTTATACCTAATTTTAATTAAAAATTTT 240
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Qy        241 TCAGTTTGTATTAAAGAGGACTCCCCAAATTATATGAGTTTCCAACTTCATAAAACCTAA 300
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Db        241 TCAGTTTGTATTAAAGAGGACTCCCCAAATTATATGAGTTTCCAACTTCATAAAACCTAA 300

Qy        301 ATCTGTCTTTGTTCATATCAGATAAAAATAGGCCACACAGACTGCCAAGTAGGTACAGTC 360
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Db        301 ATCTGTCTTTGTTCATATCAGATAAAAATAGGCCACACAGACTGCCAAGTAGGTACAGTC 360

Qy        361 TTGGAACTGTCTGTGGTGCTGGACCCAAGGTTCACTTGGGCTCTCTCCATGGGTACTTAC 420
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Db        361 TTGGAACTGTCTGTGGTGCTGGACCCAAGGTTCACTTGGGCTCTCTCCATGGGTACTTAC 420

Qy        421 TGGCCCAAGCCAAAGCTG 438
              ||||||||||||||||||
Db        421 TGGCCCAAGCCAAAGCTG 438
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ALIGNMENTS

for SEQ ID NO:683

RESULT 1
ABL63413
ID ABL63413 standard; DNA; 438 BP.
XX
AC ABL63413;
XX
DT 15-MAY-2002 (first entry)
XX
DE Breast cancer related gene sequence SEQ ID NO:1750.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.

PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.
PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set
XX
PS Claim 1; SEQ ID 1750; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 438 BP; 155 A; 74 C; 69 G; 140 T; 0 other;

Query Match 100.0%; Score 438; DB 24; Length 438;
Best Local Similarity 100.0%; Pred. No. 9.1e-83;
Matches 438; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 GATTAACTATGTGACTAAATTATATTCAAATTTTATGAACAGAAAATGATATAAATGTTA 60
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Db          1 GATTAACTATGTGACTAAATTATATTCAAATTTTATGAACAGAAAATGATATAAATGTTA 60

Qy         61 TCAGCTAATAAAGAGATTATCAAAGAGTAAGCAACCAAAACAAGTAGGCAAAAAGCATCA 120
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Db         61 TCAGCTAATAAAGAGATTATCAAAGAGTAAGCAACCAAAACAAGTAGGCAAAAAGCATCA 120

Qy        121 GAGAGTAATTAATACAAAGATGATGTTGTTTTTCTGGATTTCATAATGTTTATCATAGTT 180
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Db        121 GAGAGTAATTAATACAAAGATGATGTTGTTTTTCTGGATTTCATAATGTTTATCATAGTT 180

Qy        181 GTCAACTTTTCTCATTCAAAAAAACCCTTATTTTTATACCTAATTTTAATTAAAAATTTT 240
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Db        181 GTCAACTTTTCTCATTCAAAAAAACCCTTATTTTTATACCTAATTTTAATTAAAAATTTT 240

Qy        241 TCAGTTTGTATTAAAGAGGACTCCCCAAATTATATGAGTTTCCAACTTCATAAAACCTAA 300
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Db        241 TCAGTTTGTATTAAAGAGGACTCCCCAAATTATATGAGTTTCCAACTTCATAAAACCTAA 300

Qy        301 ATCTGTCTTTGTTCATATCAGATAAAAATAGGCCACACAGACTGCCAAGTAGGTACAGTC 360
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Db        301 ATCTGTCTTTGTTCATATCAGATAAAAATAGGCCACACAGACTGCCAAGTAGGTACAGTC 360

Qy        361 TTGGAACTGTCTGTGGTGCTGGACCCAAGGTTCACTTGGGCTCTCTCCATGGGTACTTAC 420
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Db        361 TTGGAACTGTCTGTGGTGCTGGACCCAAGGTTCACTTGGGCTCTCTCCATGGGTACTTAC 420

Qy        421 TGGCCCAAGCCAAAGCTG 438
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Db        421 TGGCCCAAGCCAAAGCTG 438
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RESULT 2
ABL63830
ID ABL63830 standard; DNA; 438 BP.
XX
AC ABL63830;
XX
DT 15-MAY-2002 (first entry)
XX
DE Breast cancer related gene sequence SEQ ID NO:2167.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.
PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.

PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.
PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 2167; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 438 BP; 155 A; 74 C; 69 G; 140 T; 0 other;

Query Match 100.0%; Score 438; DB 24; Length 438;
Best Local Similarity 100.0%; Pred. No. 9.1e-83;
Matches 438; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 GATTAACTATGTGACTAAATTATATTCAAATTTTATGAACAGAAAATGATATAAATGTTA 60
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Db          1 GATTAACTATGTGACTAAATTATATTCAAATTTTATGAACAGAAAATGATATAAATGTTA 60

Qy         61 TCAGCTAATAAAGAGATTATCAAAGAGTAAGCAACCAAAACAAGTAGGCAAAAAGCATCA 120
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Db         61 TCAGCTAATAAAGAGATTATCAAAGAGTAAGCAACCAAAACAAGTAGGCAAAAAGCATCA 120

Qy        121 GAGAGTAATTAATACAAAGATGATGTTGTTTTTCTGGATTTCATAATGTTTATCATAGTT 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 GAGAGTAATTAATACAAAGATGATGTTGTTTTTCTGGATTTCATAATGTTTATCATAGTT 180

Qy        181 GTCAACTTTTCTCATTCAAAAAAACCCTTATTTTTATACCTAATTTTAATTAAAAATTTT 240
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Db        181 GTCAACTTTTCTCATTCAAAAAAACCCTTATTTTTATACCTAATTTTAATTAAAAATTTT 240

Qy        241 TCAGTTTGTATTAAAGAGGACTCCCCAAATTATATGAGTTTCCAACTTCATAAAACCTAA 300
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Qy        301 ATCTGTCTTTGTTCATATCAGATAAAAATAGGCCACACAGACTGCCAAGTAGGTACAGTC 360
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Db        301 ATCTGTCTTTGTTCATATCAGATAAAAATAGGCCACACAGACTGCCAAGTAGGTACAGTC 360

Qy        361 TTGGAACTGTCTGTGGTGCTGGACCCAAGGTTCACTTGGGCTCTCTCCATGGGTACTTAC 420
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Db        361 TTGGAACTGTCTGTGGTGCTGGACCCAAGGTTCACTTGGGCTCTCTCCATGGGTACTTAC 420

Qy        421 TGGCCCAAGCCAAAGCTG 438
              ||||||||||||||||||
Db        421 TGGCCCAAGCCAAAGCTG 438
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f.- SEQ ID NO: 767

RESULT 1
AA227221
LOCUS AA227221 381 bp mRNA linear EST 11-MAR-1998
DEFINITION zr20f08.s1 Stratagene NT2 neuronal precursor 937230 Homo sapiens cDNA clone IMAGE:663975 3', mRNA sequence.
ACCESSION AA227221
VERSION AA227221.1 GI:1848766
KEYWORDS EST.
SOURCE human.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 381)
AUTHORS Hillier,L., Allen,M., Bowles,L., Dubuque,T., Geisel,G., Jost,S., Krizman,D., Kucaba,T., Lacy,M., Le,N., Lennon,G., Marra,M., Martin,J., Moore,B., Schellenberg,K., Steptoe,M., Tan,F., Theising,B., White,Y., Wylie,T., Waterston,R. and Wilson,R.
TITLE WashU-NCI human EST Project
JOURNAL Unpublished (1997)
COMMENT Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 1909 Std Error: 0.00
Seq primer: -41m13 fwd. ET from Amersham.

FEATURES Location/Qualifiers
source 1. .381
/organism="Homo sapiens"
/db_xref="GDB:5425825"
/db_xref="taxon:9606"
/clone="IMAGE:663975"
/clone_lib="Stratagene NT2 neuronal precursor 937230"
/tissue_type="neuroepithelial cells"
/dev_stage="Ntera-2 neuroepithelial cells"
/lab_host="SOLR (kanamycin resistant)"
/note="Organ: brain; Vector: pBluescript SK-; Site_1: EcoRI; Site_2: XhoI; Cloned unidirectionally. Primer: Oligo dT. Uninduced, exponentially growing neuroepithelial cells (Ntera-2/cl.D1). Average insert size: 1.0 kb; Uni-ZAP XR Vector; -5' adaptor sequence: 5' GAATTCGGCACGAG 3' -3' adaptor sequence: 5' CTCGAGTTTTTTTTTTTTTTTT 3'"
BASE COUNT 135 a 72 c 53 g 121 t
ORIGIN

Query Match 100.0%; Score 381; DB 9; Length 381;
Best Local Similarity 100.0%; Pred. No. 7e-70;
Matches 381; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 CTGAATTAAAGAGATGAATTTATTGGTAAATAGATAAAATTAACACCTATTTTAATATAT 60
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Db          1 CTGAATTAAAGAGATGAATTTATTGGTAAATAGATAAAATTAACACCTATTTTAATATAT 60

Qy         61 CCAAACCCCTTCCTTATATATATTAGGTAAATTAAAAGAAAAAAATTATCAAAGCAATAC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 CCAAACCCCTTCCTTATATATATTAGGTAAATTAAAAGAAAAAAATTATCAAAGCAATAC 120

Qy        121 TACAGCCAGCTAGATCGCCAATTTACAAATGAGTTAAGTAAGTACCATAAGTTTGTTTGA 180
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Db        121 TACAGCCAGCTAGATCGCCAATTTACAAATGAGTTAAGTAAGTACCATAAGTTTGTTTGA 180

Qy        181 ATATCAGGTGCTTCAGAGTTTTTCTCAAACAGTTACAAAAGAGATTAGGTTCCCAATCAG 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ATATCAGGTGCTTCAGAGTTTTTCTCAAACAGTTACAAAAGAGATTAGGTTCCCAATCAG 240

Qy        241 TTCACAAAAGCTAATTTAGAGAATGTAGCTTAACTACAGTACTGAGGTTGTCACACACTT 300
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Db        241 TTCACAAAAGCTAATTTAGAGAATGTAGCTTAACTACAGTACTGAGGTTGTCACACACTT 300

Qy        301 AACTTTCGGTCTCTTGCTTATTTATTCATATCTGAGGTTCACTGTTTCTACTAGGATACA 360
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Db        301 AACTTTCGGTCTCTTGCTTATTTATTCATATCTGAGGTTCACTGTTTCTACTAGGATACA 360

Qy        361 TTCCGCCCACACCCACACCTC 381
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Db        361 TTCCGCCCACACCCACACCTC 381
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ALIGNMENTS

for SEQ ID NO:767

RESULT 1
ABL63497
ID ABL63497 standard; DNA; 381 BP.
XX
AC ABL63497;
XX
DT 15-MAY-2002 (first entry)
XX
DE Breast cancer related gene sequence SEQ ID NO:1834.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.

PR 25-SEP-2000; 2000US-234923P.
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PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 1834; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 381 BP; 135 A; 72 C; 53 G; 121 T; 0 other;

Query Match 100.0%; Score 381; DB 24; Length 381;
Best Local Similarity 100.0%; Pred. No. 1.5e-75;
Matches 381; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 CTGAATTAAAGAGATGAATTTATTGGTAAATAGATAAAATTAACACCTATTTTAATATAT 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CTGAATTAAAGAGATGAATTTATTGGTAAATAGATAAAATTAACACCTATTTTAATATAT 60

Qy         61 CCAAACCCCTTCCTTATATATATTAGGTAAATTAAAAGAAAAAAATTATCAAAGCAATAC 120
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Qy        181 ATATCAGGTGCTTCAGAGTTTTTCTCAAACAGTTACAAAAGAGATTAGGTTCCCAATCAG 240
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Db        301 AACTTTCGGTCTCTTGCTTATTTATTCATATCTGAGGTTCACTGTTTCTACTAGGATACA 360

Qy        361 TTCCGCCCACACCCACACCTC 381
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RESULT 2
ABL63936
ID ABL63936 standard; DNA; 381 BP.
XX
AC ABL63936;
XX
DT 15-MAY-2002 (first entry)
XX
DE Breast cancer related gene sequence SEQ ID NO:2273.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.
PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
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PR 27-SEP-2000; 2000US-235711P.
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PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 2273; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 381 BP; 135 A; 72 C; 53 G; 121 T; 0 other;

Query Match 100.0%; Score 381; DB 24; Length 381;
Best Local Similarity 100.0%; Pred. No. 1.5e-75;
Matches 381; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy        181 ATATCAGGTGCTTCAGAGTTTTTCTCAAACAGTTACAAAAGAGATTAGGTTCCCAATCAG 240
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Qy        241 TTCACAAAAGCTAATTTAGAGAATGTAGCTTAACTACAGTACTGAGGTTGTCACACACTT 300
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Db        241 TTCACAAAAGCTAATTTAGAGAATGTAGCTTAACTACAGTACTGAGGTTGTCACACACTT 300

Qy        301 AACTTTCGGTCTCTTGCTTATTTATTCATATCTGAGGTTCACTGTTTCTACTAGGATACA 360
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Qy        361 TTCCGCCCACACCCACACCTC 381
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Db        361 TTCCGCCCACACCCACACCTC 381
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for SEQ ID NO: 804

RESULT 1
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LOCUS D80055 517 bp mRNA linear EST 09-FEB-1996
DEFINITION HUM015G10A Human fetal brain (TFujiwara) Homo sapiens cDNA clone GEN-015G10 3', mRNA sequence.
ACCESSION D80055
VERSION D80055.1 GI:1177932
KEYWORDS EST.
SOURCE human.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 517)
AUTHORS Fujiwara,T., Hirano,H., Katagiri,T., Kawai,A., Kuga,Y., Nagata,M., Okuno,S., Ozaki,K., Shimizu,F., Shimada,Y., Shinomiya,H., Takaichi,A., Takeda,S., Watanabe,T., Takahashi,E., Hirai,Y., Maekawa,H., Shin,S. and Nakamura,Y.
TITLE Fujiwara et al. (1995)
JOURNAL Unpublished (1995)
COMMENT Contact: Tsutomu Fujiwara
Otsuka GEN Research Institute
Otsuka Pharmaceutical Co.,Ltd
463-10 kagasuno Kawauchi-cho, Tokushima, Tokushima, 771-01 Japan
Tel: 0886-65-2888
Fax: 0886-37-1035.
FEATURES Location/Qualifiers
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/db_xref="taxon:9606"
/clone="GEN-015G10"
/clone_lib="Human fetal brain (TFujiwara)"
/dev_stage="fetal"
/note="Organ: brain"
BASE COUNT 188 a 119 c 91 g 117 t 2 others
ORIGIN

Query Match 99.8%; Score 515.8; DB 14; Length 517;
Best Local Similarity 100.0%; Pred. No. 4.6e-117;
Matches 517; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 CCAAATTTCAAAAAGTTTTATTTTGAAAGAATGAGAGAAATAAAACAGAGAGGTATCAAT 60

Qy         61 TACCAAGAACAATTACACTGAAGAAAACACAATAATAAGTACTCTCCCACACAACCCCCC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 TACCAAGAACAATTACACTGAAGAAAACACAATAATAAGTACTCTCCCACACAACCCCCC 120

Qy        121 CCATTTCCCCATCCCTGGCACAATAATATTAAAACCACCAAAGCACACCTAACAAGGAAA 180
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Qy        181 AACAACAGTACGTAATGAAAAAAGCAAATGTCCATACTGCTCAGTCCAACTAACCCTTAT 240
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Db        481 TCAACCGTAACAGTGGGGBAGCTGCCAAATCCTGGGT 517
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ALIGNMENTS

for SEQ ID NO: 804

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RESULT 1
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ID   ABL61767 standard; DNA; 517 BP.
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AC   ABL61767;
XX
DT   15-MAY-2002  (first entry)
XX
DE   Colon adenocarcinoma related gene sequence SEQ ID NO:104.
XX
KW   Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW   stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW   cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW   gene; ds.
XX
OS   Homo sapiens.
XX
PN   WO200194629-A2.
XX
PD   13-DEC-2001.
XX
PF   30-MAY-2001; 2001WO-US10838.
XX
PR   05-JUN-2000; 2000US-209473P.
PR   05-JUN-2000; 2000US-209531P.
PR   18-SEP-2000; 2000US-233133P.
PR   18-SEP-2000; 2000US-233617P.
PR   20-SEP-2000; 2000US-234009P.
PR   20-SEP-2000; 2000US-234034P.
PR   20-SEP-2000; 2000US-234052P.
PR   22-SEP-2000; 2000US-234509P.
PR   22-SEP-2000; 2000US-234567P.
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PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.
PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
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PR 03-OCT-2000; 2000US-237606P.
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PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set
XX
PS Claim 1; SEQ ID 104; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 517 BP; 188 A; 119 C; 91 G; 117 T; 2 other;

Query Match 99.8%; Score 515.8; DB 24; Length 517;
Best Local Similarity 100.0%; Pred. No. 4e-132;
Matches 517; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy         61 TACCAAGAACAATTACACTGAAGAAAACACAATAATAAGTACTCTCCCACACAACCCCCC 120
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Qy        301 CCCTAGGGGAGACTTGGAACTCTGCTTATACTAGCAAAGCTCAGTGAAGAATCAGTAAGA 360
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Db        481 TCAACCGTAACAGTGGGGBAGCTGCCAAATCCTGGGT 517
```

RESULT 2
ABL63534
ID ABL63534 standard; DNA; 517 BP.
XX
AC ABL63534;
XX
DT 15-MAY-2002 (first entry)
XX
DE Breast cancer related gene sequence SEQ ID NO:1871.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.
PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.

PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.
PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 1871; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 517 BP; 188 A; 119 C; 91 G; 117 T; 2 other;

Query Match 99.8%; Score 515.8; DB 24; Length 517;
Best Local Similarity 100.0%; Pred. No. 4e-132;
Matches 517; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 CCAAATTTCAAAAAGTTTTATTTTGAAAGAATGAGAGAAATAAAACAGAGAGGTATCAAT 60
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Qy         61 TACCAAGAACAATTACACTGAAGAAAACACAATAATAAGTACTCTCCCACACAACCCCCC 120
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Qy        121 CCATTTCCCCATCCCTGGCACAATAATATTAAAACCACCAAAGCACACCTAACAAGGAAA 180
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Qy        181 AACAACAGTACGTAATGAAAAAAGCAAATGTCCATACTGCTCAGTCCAACTAACCCTTAT 240
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Qy        361 GTAGTGAATCTGTTTGGCAGTGAACACTGGATATAGCTTCTTTTTCAAATTTTGGATGAT 420
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Qy        421 TGCAGAGAACAGGTAGAGTTTGAGGCTCACAGACTTCTAACAGGACTGATCCCTGTTCCC 480
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Qy        481 TCAACCGTAACAGTGGGGBAGCTGCCAAATCCTGGGT 517
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Db        481 TCAACCGTAACAGTGGGGBAGCTGCCAAATCCTGGGT 517
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fr- SEQ ID NO:820

RESULT 1
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LOCUS N45300 595 bp mRNA linear EST 13-FEB-1996
DEFINITION yz16g09.s1 Soares_multiple_sclerosis_2NbHMSP Homo sapiens cDNA clone IMAGE:283264 3', mRNA sequence.
ACCESSION N45300
VERSION N45300.1 GI:1186466
KEYWORDS EST.
SOURCE human.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 595)
AUTHORS Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and Wilson,R.
TITLE The WashU-Merck EST Project
JOURNAL Unpublished (1995)
COMMENT Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: m13 -40 forward
High quality sequence stop: 386.

FEATURES Location/Qualifiers
source 1. .595
/organism="Homo sapiens"
/db_xref="GDB:3901792"
/db_xref="taxon:9606"
/clone="IMAGE:283264"
/clone_lib="Soares_multiple_sclerosis_2NbHMSP"
/sex="male"
/tissue_type="multiple sclerosis lesions"
/dev_stage="Age 46"
/lab_host="DH10B (ampicillin resistant)"
/note="Vector: pT7T3D (Pharmacia) with a modified polylinker V_TYPE: phagemid; Site_1: Not I; Site_2: Eco RI ; 1st strand cDNA was primed with a Not I - oligo(dT) primer [5' TGTTACCAATCTGAAGTGGGAGCGGCCGCATTTTTTTTTTTTTTTTTT 3'], double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT7T3 vector (Pharmacia). Library went through one round of normalization to a Cot - 5. Library constructed by Bento Soares and M.Fatima Bonaldo. RNA from 4 multiple sclerosis lesions from one patient was kindly provided by Dr. Kevin G. Becker (NINDS/NIH). "

BASE COUNT 193 a 114 c 99 g 186 t 3 others
ORIGIN

Query Match 99.5%; Score 592; DB 14; Length 595;
Best Local Similarity 100.0%; Pred. No. 1.6e-137;
Matches 595; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 GACAAAAATAATCTTGTTTTTATTTTAGATTCAGATTTCATTACTGCACTCAAACGACTA 60
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Db          1 GACAAAAATAATCTTGTTTTTATTTTAGATTCAGATTTCATTACTGCACTCAAACGACTA 60

Qy         61 CAACTGGGCTTGGCGTTATTATACAATCCAAACTGTTTCCATCAGAAACGCTAAGACTCA 120
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Db         61 CAACTGGGCTTGGCGTTATTATACAATCCAAACTGTTTCCATCAGAAACGCTAAGACTCA 120

Qy        121 GTGTGCAATGATTGTTATTAATAATTAGCTCCTTGGTTTCTTGATAGAAAAAGGCTATCA 180
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Db        121 GTGTGCAATGATTGTTATTAATAATTAGCTCCTTGGTTTCTTGATAGAAAAAGGCTATCA 180

Qy        181 ACAAGCATTTGTTTATCCACAACAAAAAGTATAATTAGCTTATCCCACTTAGTAAATCTT 240
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Db        181 ACAAGCATTTGTTTATCCACAACAAAAAGTATAATTAGCTTATCCCACTTAGTAAATCTT 240

Qy        241 GTATGCATGCCAACTCATACCAAACTGCTACTTTTACAAAAAAAAAATTGCAATAATACAG 300
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Qy        421 ATTANAAATAAATCTTCAGTCTATGTTTTAGAGCTGCTTAAAACAGGAAGTGATGTATAA 480
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Db        421 ATTANAAATAAATCTTCAGTCTATGTTTTAGAGCTGCTTAAAACAGGAAGTGATGTATAA 480

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Qy        541 ACACACGGNCTTTGGGTTTCCATGCCTCCTNCTACCAGTCTCCTTAAGACCCTGC 595
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ALIGNMENTS

for SEQ ID NO:820

RESULT 1
ABL63550
ID ABL63550 standard; DNA; 595 BP.
XX
AC ABL63550;
XX
DT 15-MAY-2002 (first entry)
XX
DE Breast cancer related gene sequence SEQ ID NO:1887.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.

PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.
PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 1887; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 595 BP; 193 A; 114 C; 99 G; 186 T; 3 other;

Query Match 99.5%; Score 592; DB 24; Length 595;
Best Local Similarity 100.0%; Pred. No. 2.5e-136;
Matches 595; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 GACAAAAATAATCTTGTTTTTATTTTAGATTCAGATTTCATTACTGCACTCAAACGACTA 60
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Qy        361 GGTGGGACTATGAAAAAATACACACATGACCGATGCTTTGCTCAGAAATAAAGTCAACAT 420
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Qy        421 ATTANAAATAAATCTTCAGTCTATGTTTTAGAGCTGCTTAAAACAGGAAGTGATGTATAA 480
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for SEQ ID NO:910

RESULT 1
D60118
LOCUS D60118 389 bp mRNA linear EST 28-AUG-1995
DEFINITION HUM087A05A Clontech human fetal brain polyA+ mRNA (#6535) Homo sapiens cDNA clone GEN-087A05 3', mRNA sequence.
ACCESSION D60118
VERSION D60118.1 GI:961757
KEYWORDS EST.
SOURCE human.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 389)
AUTHORS Fujiwara,T., Hirano,H., Katagiri,T., Kawai,A., Kuga,Y., Nagata,M., Okuno,S., Ozaki,K., Shimizu,F., Shimada,Y., Shinomiya,H., Takaichi,A., Takeda,S., Watanabe,T., Takahashi,E., Hirai,Y., Maekawa,H., Shin,S. and Nakamura,Y.
TITLE Fujiwara et al. (1995)
JOURNAL Unpublished (1995)
COMMENT Contact: Tsutomu Fujiwara
Otsuka GEN Research Institute
Otsuka Pharmaceutical Co.,Ltd
463-10 kagasuno Kawauchi-cho, Tokushima, Tokushima, 771-01 Japan
Tel: 0886-65-2888
Fax: 0886-37-1035.
FEATURES Location/Qualifiers
source 1. .389
/organism="Homo sapiens"
/db_xref="taxon:9606"

/clone="GEN-087A05"
/clone_lib="Clontech human fetal brain polyA+ mRNA (#6535)"
/note="Male adult, hematopoietic tissue, stem cell"
BASE COUNT 132 a 65 c 87 g 92 t 13 others
ORIGIN

Query Match 97.9%; Score 380.8; DB 14; Length 389;
Best Local Similarity 100.0%; Pred. No. 1.2e-95;
Matches 389; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy         61 GCCTTAGCAATCTCAATAAAAATATGAVGTTCTTTTTACATGGTAAATTTCATAATATAA 120
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Qy        181 CTAANNCTGCATATAAGGVACGTGAATSCCAGTGGAAAGGTGTCTGAGGAGGGGCAGGGC 240
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Qy        301 CAAACCACAGGTACACTCATTTTAGATAGGMCAGCAGAATAGGTGATGAAATTATACAGT 360
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Qy        361 TTYCACTTGTTGCCTACTTACTGAAGCAA 389
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Db        361 TTYCACTTGTTGCCTACTTACTGAAGCAA 389
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for SEQ ID NO: 910

RESULT 1
ABL63640
ID ABL63640 standard; DNA; 389 BP.
XX
AC ABL63640;
XX
DT 15-MAY-2002 (first entry)
XX
DE Breast cancer related gene sequence SEQ ID NO:1977.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.

PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
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PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.
PR 28-SEP-2000; 2000US-236033P.
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PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 1977; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 389 BP; 132 A; 65 C; 87 G; 92 T; 13 other;

Query Match 97.9%; Score 380.8; DB 24; Length 389;
Best Local Similarity 100.0%; Pred. No. 1.7e-98;
Matches 389; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 AAAACTGAGGGAACTCATGCTTTAATAGACACTGAAAATCACAAAGGRGGAAGGCCAAGT 60
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Qy         61 GCCTTAGCAATCTCAATAAAAATATGAVGTTCTTTTTACATGGTAAATTTCATAATATAA 120
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Qy        121 MANGTTTAATGTCTGGVAATGGTGTAATTTACAAAAMAAGTCCACGTAGGCCAAAGATGG 180
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Qy        181 CTAANNCTGCATATAAGGVACGTGAATSCCAGTGGAAAGGTGTCTGAGGAGGGGCAGGGC 240
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Qy        301 CAAACCACAGGTACACTCATTTTAGATAGGMCAGCAGAATAGGTGATGAAATTATACAGT 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 CAAACCACAGGTACACTCATTTTAGATAGGMCAGCAGAATAGGTGATGAAATTATACAGT 360

Qy        361 TTYCACTTGTTGCCTACTTACTGAAGCAA 389
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Db        361 TTYCACTTGTTGCCTACTTACTGAAGCAA 389
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ALIGNMENTS

for SEQ ID NO: 1019.

RESULT 1
H02533
LOCUS H02533 445 bp mRNA linear EST 20-JUN-1995
DEFINITION yj40f11.r1 Soares placenta Nb2HP Homo sapiens cDNA clone IMAGE:151245 5', mRNA sequence.
ACCESSION H02533
VERSION H02533.1 GI:865466
KEYWORDS EST.
SOURCE human.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 445)
AUTHORS Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and Wilson,R.
TITLE The WashU-Merck EST Project
JOURNAL Unpublished (1995)
COMMENT Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
Insert Size: 739
High qality sequence stops: 331
Source: IMAGE Consortium, LLNL
This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 739 Std Error: 0.00
Seq primer: M13RP1
High quality sequence stop: 331.

FEATURES Location/Qualifiers
source 1. .445
/organism="Homo sapiens"
/db_xref="GDB:563320"
/db_xref="taxon:9606"
/clone="IMAGE:151245"
/clone_lib="Soares placenta Nb2HP"
/sex="Female"
/dev_stage="placenta obtained at birth (full term)"
/lab_host="DH10B (ampicillin resistant)"
/note="Organ: placenta; Vector: pT7T3D (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; 1st strand cDNA was primed with a Not I - oligo(dT) primer [5' AACTGGAAGAATTCGCGGCCGCAGGAATTTTTTTTTTTTTTTTT 3'], double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization. Library constructed by Bento Soares and M.Fatima Bonaldo. "

BASE COUNT 130 a 78 c 70 g 165 t 2 others
ORIGIN

Query Match 99.6%; Score 443; DB 14; Length 445;
Best Local Similarity 100.0%; Pred. No. 2e-80;
Matches 445; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy         61 ACAACTTTTTTTCCTTTTATCCCCAACTTTTGCCAGAAAGCAGAAAAATGCTCTATTTTT 120
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Db         61 ACAACTTTTTTTCCTTTTATCCCCAACTTTTGCCAGAAAGCAGAAAAATGCTCTATTTTT 120

Qy        121 ATAAAGAAAGATTAAATTCTCCAATGATATTTTAAAAAATATCAACCTACATGCACTTTA 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 ATAAAGAAAGATTAAATTCTCCAATGATATTTTAAAAAATATCAACCTACATGCACTTTA 180

Qy        181 GAATGTAAAATAACAATGACTATTTTAAACTCGAAGACCCACTATTTTGAGTATTTTTTA 240
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Qy        241 TAGACTTTAAATACTGGGTTTTTTTCCTCCTTCAATCTCAGGGCTTTTCTCCATCTTTTA 300
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Qy        301 AGGCAGCCTCTGTAACTCCCTTTTGTCCATAGGTGTTGCGTGCCTCTGCATCTGTGGGGG 360
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Qy        361 AAGTATTATTTAAATAAAATTTATGTTACAGGGATAACTTTATTTTAANGGGGCNGGGGC 420
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Db        361 AAGTATTATTTAAATAAAATTTATGTTACAGGGATAACTTTATTTTAANGGGGCNGGGGC 420

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Db        421 TTGTCTATACACAAGGGTATGTATG 445
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for SEQ ID NO: 1019

RESULT 1
ABL63749
ID ABL63749 standard; DNA; 445 BP.
XX
AC ABL63749;
XX
DT 15-MAY-2002 (first entry)
XX
DE Breast cancer related gene sequence SEQ ID NO:2086.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.

PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.
PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 2086; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 445 BP; 130 A; 78 C; 70 G; 165 T; 2 other;

Query Match 99.6%; Score 443; DB 24; Length 445;
Best Local Similarity 100.0%; Pred. No. 1e-89;
Matches 445; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 TTTTACTGCACAATTCACAAGCATGTTTTCCTGGTGAATTGGACTGAAAATTACATTTTG 60

Qy         61 ACAACTTTTTTTCCTTTTATCCCCAACTTTTGCCAGAAAGCAGAAAAATGCTCTATTTTT 120
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Db         61 ACAACTTTTTTTCCTTTTATCCCCAACTTTTGCCAGAAAGCAGAAAAATGCTCTATTTTT 120

Qy        121 ATAAAGAAAGATTAAATTCTCCAATGATATTTTAAAAAATATCAACCTACATGCACTTTA 180
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Db        301 AGGCAGCCTCTGTAACTCCCTTTTGTCCATAGGTGTTGCGTGCCTCTGCATCTGTGGGGG 360

Qy        361 AAGTATTATTTAAATAAAATTTATGTTACAGGGATAACTTTATTTTAANGGGGCNGGGGC 420
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Qy        421 TTGTCTATACACAAGGGTATGTATG 445
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Db        421 TTGTCTATACACAAGGGTATGTATG 445
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for SEQ ID NO: 1040

RESULT 1
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LOCUS AA010665 403 bp mRNA linear EST 29-NOV-1996
DEFINITION ze19f06.s1 Soares_fetal_heart_NbHH19W Homo sapiens cDNA clone IMAGE:359459 3', mRNA sequence.
ACCESSION AA010665
VERSION AA010665.1 GI:1471692
KEYWORDS EST.
SOURCE human.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 403)
AUTHORS Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and Wilson,R.
TITLE The WashU-Merck EST Project
JOURNAL Unpublished (1995)
COMMENT Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
Insert Length: 495 Std Error: 0.00
Seq primer: mob.REGA+ET.

FEATURES Location/Qualifiers
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/db_xref="GDB:1276003"
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/clone="IMAGE:359459"
/clone_lib="Soares_fetal_heart_NbHH19W"
/sex="unknown"
/dev_stage="19 weeks"
/lab_host="DH10B (ampicillin resistant)"
/note="Organ: heart; Vector: pT7T3D (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; 1st strand cDNA was primed with a Not I - oligo(dT) primer [5' TGTTACCAATCTGAAGTGGGAGCGGCCGCATCTTTTTTTTTTTTTTTTT 3'], double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT7T3 vector (Pharmacia). Library went through one round of normalization to a Cot = 5. Library constructed by M.Fatima Bonaldo. This library was constructed from the same fetus as the fetal lung library, Soares fetal lung NbHL19W."
BASE COUNT 98 a 109 c 104 g 92 t
ORIGIN

Query Match 100.0%; Score 403; DB 9; Length 403;
Best Local Similarity 100.0%; Pred. No. 6e-98;
Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy         61 ATACATTAGTGTATCACACAAGGAAACTGGGCCTGGCCGGCACAAGGTTCCTCTACAAAC 120
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Qy        121 ATGAAGCAAGGGGAAGGTGGGCTACAGGGAAGCTCCAAGATCCCTCACAGCAGCCCCCGG 180
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Qy        241 CAAGGTGGACATGCAGACAGCAACACTGCCTCTTGGGTCCCCAGGAGGAGTGTGGAGTCA 300
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Qy        361 TGGCCGCTAGCACAGGAGATCCCAGGGCAGAGTCTGTGTCCTT 403
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Db        361 TGGCCGCTAGCACAGGAGATCCCAGGGCAGAGTCTGTGTCCTT 403
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ALIGNMENTS

RESULT 1 f- SEQ ID NO:1040
ABL63770
ID ABL63770 standard; DNA; 403 BP.
XX
AC ABL63770;
XX
DT 15-MAY-2002 (first entry)
XX
DE Breast cancer related gene sequence SEQ ID NO:2107.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.

PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
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PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
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PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 2107; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 403 BP; 98 A; 109 C; 104 G; 92 T; 0 other;

Query Match 100.0%; Score 403; DB 24; Length 403;
Best Local Similarity 100.0%; Pred. No. 2.6e-116;
Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy        301 GGGCTGCTAGTGTGGTCCCCACTGCAGAGGTGGCTGGTGGCCAATGACTGGATTTGTCAT 360
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Db        301 GGGCTGCTAGTGTGGTCCCCACTGCAGAGGTGGCTGGTGGCCAATGACTGGATTTGTCAT 360

Qy        361 TGGCCGCTAGCACAGGAGATCCCAGGGCAGAGTCTGTGTCCTT 403
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Db        361 TGGCCGCTAGCACAGGAGATCCCAGGGCAGAGTCTGTGTCCTT 403
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RESULT 2
ABL66331
ID ABL66331 standard; DNA; 403 BP.
XX
AC ABL66331;
XX
DT 15-MAY-2002 (first entry)
XX
DE Lung cancer related gene sequence SEQ ID NO:4668.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
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PR 25-SEP-2000; 2000US-234923P.
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PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.
PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set
XX
PS Claim 1; SEQ ID 4668; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 403 BP; 98 A; 109 C; 104 G; 92 T; 0 other;

Query Match 100.0%; Score 403; DB 24; Length 403;
Best Local Similarity 100.0%; Pred. No. 2.6e-116;
Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 TTTTTTTTTTCAAAGAAACACTAGCAATTTATTGATTTTCTCTATTTCCAAAAAAAGCAA 60
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Db          1 TTTTTTTTTTCAAAGAAACACTAGCAATTTATTGATTTTCTCTATTTCCAAAAAAAGCAA 60

Qy         61 ATACATTAGTGTATCACACAAGGAAACTGGGCCTGGCCGGCACAAGGTTCCTCTACAAAC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 ATACATTAGTGTATCACACAAGGAAACTGGGCCTGGCCGGCACAAGGTTCCTCTACAAAC 120

Qy        121 ATGAAGCAAGGGGAAGGTGGGCTACAGGGAAGCTCCAAGATCCCTCACAGCAGCCCCCGG 180
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Qy        181 TTCCCTTCCCTGCCCACCCCAGCCGCAGTCTTGGTCCTGCCAGCCAGTTCAGCCAGATTC 240
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Db        181 TTCCCTTCCCTGCCCACCCCAGCCGCAGTCTTGGTCCTGCCAGCCAGTTCAGCCAGATTC 240

Qy        241 CAAGGTGGACATGCAGACAGCAACACTGCCTCTTGGGTCCCCAGGAGGAGTGTGGAGTCA 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CAAGGTGGACATGCAGACAGCAACACTGCCTCTTGGGTCCCCAGGAGGAGTGTGGAGTCA 300

Qy        301 GGGCTGCTAGTGTGGTCCCCACTGCAGAGGTGGCTGGTGGCCAATGACTGGATTTGTCAT 360
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Qy        361 TGGCCGCTAGCACAGGAGATCCCAGGGCAGAGTCTGTGTCCTT 403
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RESULT 3
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ID ABL67711 standard; DNA; 403 BP.
XX
AC ABL67711;
XX
DT 15-MAY-2002 (first entry)
XX
DE Oesophagus cancer related gene sequence SEQ ID NO:6048.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
PR 18-SEP-2000; 2000US-233133P.
PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
PR 20-SEP-2000; 2000US-234034P.
PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.
PR 25-SEP-2000; 2000US-234923P.
PR 25-SEP-2000; 2000US-234924P.
PR 25-SEP-2000; 2000US-235077P.
PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
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PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
PR 02-OCT-2000; 2000US-237294P.
PR 02-OCT-2000; 2000US-237295P.
PR 02-OCT-2000; 2000US-237316P.
PR 03-OCT-2000; 2000US-237425P.
PR 03-OCT-2000; 2000US-237598P.

PR 03-OCT-2000; 2000US-237604P.
PR 03-OCT-2000; 2000US-237606P.
PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set -
XX
PS Claim 1; SEQ ID 6048; 44pp; English.
XX
CC **The present invention describes a method (M1)** for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 403 BP; 98 A; 109 C; 104 G; 92 T; 0 other;

Query Match 100.0%; Score 403; DB 24; Length 403;
Best Local Similarity 100.0%; Pred. No. 2.6e-116;
Matches 403; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy        301 GGGCTGCTAGTGTGGTCCCCACTGCAGAGGTGGCTGGTGGCCAATGACTGGATTTGTCAT 360
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for SEQ ID NO:1247

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ACCESSION N69022
VERSION N69022.1 GI:1225183
KEYWORDS EST.
SOURCE human.
ORGANISM Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE 1 (bases 1 to 448)
AUTHORS Hillier,L., Clark,N., Dubuque,T., Elliston,K., Hawkins,M., Holman,M., Hultman,M., Kucaba,T., Le,M., Lennon,G., Marra,M., Parsons,J., Rifkin,L., Rohlfing,T., Soares,M., Tan,F., Trevaskis,E., Waterston,R., Williamson,A., Wohldmann,P. and Wilson,R.
TITLE The WashU-Merck EST Project
JOURNAL Unpublished (1995)
COMMENT Contact: Wilson RK
Washington University School of Medicine
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108
Tel: 314 286 1800
Fax: 314 286 1810
Email: est@watson.wustl.edu
This clone is available royalty-free through LLNL ; contact the IMAGE Consortium (info@image.llnl.gov) for further information.
Seq primer: m13 -40 forward
High quality sequence stop: 307.

FEATURES Location/Qualifiers
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/organism="Homo sapiens"
/db_xref="GDB:1242949"
/db_xref="taxon:9606"
/clone="IMAGE:298027"
/clone_lib="Soares_fetal_lung_NbHL19W"
/dev_stage="19 weeks"
/lab_host="DH10B (ampicillin resistant)"
/note="Organ: lung; Vector: pT7T3D (Pharmacia) with a modified polylinker; Site_1: Not I; Site_2: Eco RI; 1st strand cDNA was primed with a Not I - oligo(dT) primer [5'-TGTTACCAATCTGAAGTGGGAGCGGCCGCAATTTTTTTTTTTTTTTTT-3'], double-stranded cDNA was size selected, ligated to Eco RI adapters (Pharmacia), digested with Not I and cloned into the Not I and Eco RI sites of a modified pT7T3 vector (Pharmacia). Library went through one round of normalization to a Cot = 5. Library constructed by Bento Soares and M.Fatima Bonaldo. This library was constructed from the same fetus as the fetal heart library, Soares fetal heart NbHH19W."

BASE COUNT 128 a 98 c 94 g 127 t 1 others
ORIGIN

Query Match 99.8%; Score 447; DB 14; Length 448;
Best Local Similarity 100.0%; Pred. No. 9e-104;
Matches 448; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Db          1 CAAGCCATGAAAAGCCTTTTAATGACAATTGGCATCACAGGTATAAATAAATATCTTCTT 60

Qy         61 CTTTCCATCTATAATATGTGCTACAAATATATTTTTCAAAGGTCCAACCCAGGTTAGGAG 120
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Db         61 CTTTCCATCTATAATATGTGCTACAAATATATTTTTCAAAGGTCCAACCCAGGTTAGGAG 120

Qy        121 GCTTCAAGGACCCTTTCTTAGCTACTGATTTTAGTAATTAAAAAAATAAACACAATAAAC 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 GCTTCAAGGACCCTTTCTTAGCTACTGATTTTAGTAATTAAAAAAATAAACACAATAAAC 180

Qy        181 ACCCCTGGCATCTTTGTGAGCGCCCCCCTGCGGAGAGCATCGAGGGCTGTCAGGCATCTT 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ACCCCTGGCATCTTTGTGAGCGCCCCCCTGCGGAGAGCATCGAGGGCTGTCAGGCATCTT 240

Qy        241 CCTCCTGCAGCCGCAGCCAATGGAGCACACGGAGAACTGGAGTCAGGTGATCACGAAGGG 300
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Qy        301 GCTTATTTCACTGGGCGTGGTCTACGTTGCCACATGTGTCGCTTTGGGATGAATGCATTT 360
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Qy        361 TTTNCAATGTGCTGCTTACACAATTATGCTGGTTCCAAAAACACAGTTGGATTGGACAAT 420
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Qy        421 CTAACATAGGATTTTAATCCTTAGAGGT 448
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ALIGNMENTS

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AC ABL63977;
XX
DT 15-MAY-2002 (first entry)
XX
DE Breast cancer related gene sequence SEQ ID NO:2314.
XX
KW Human; cancer; colon; breast; ovary; oesophagus; kidney; thyroid;
KW stomach; lung; prostate; pancreas; carcinoma; antitumour; cancerous;
KW cytostatic; gene therapy; antineoplastic; Wilm's tumour; adenocarcinoma;
KW gene; ds.
XX
OS Homo sapiens.
XX
PN WO200194629-A2.
XX
PD 13-DEC-2001.
XX
PF 30-MAY-2001; 2001WO-US10838.
XX
PR 05-JUN-2000; 2000US-209473P.
PR 05-JUN-2000; 2000US-209531P.
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PR 18-SEP-2000; 2000US-233617P.
PR 20-SEP-2000; 2000US-234009P.
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PR 20-SEP-2000; 2000US-234052P.
PR 22-SEP-2000; 2000US-234509P.
PR 22-SEP-2000; 2000US-234567P.

PR 25-SEP-2000; 2000US-234923P.
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PR 25-SEP-2000; 2000US-235082P.
PR 25-SEP-2000; 2000US-235134P.
PR 25-SEP-2000; 2000US-235280P.
PR 26-SEP-2000; 2000US-235637P.
PR 26-SEP-2000; 2000US-235638P.
PR 27-SEP-2000; 2000US-235711P.
PR 27-SEP-2000; 2000US-235720P.
PR 27-SEP-2000; 2000US-235840P.
PR 27-SEP-2000; 2000US-235863P.
PR 28-SEP-2000; 2000US-236028P.
PR 28-SEP-2000; 2000US-236032P.
PR 28-SEP-2000; 2000US-236033P.
PR 28-SEP-2000; 2000US-236034P.
PR 28-SEP-2000; 2000US-236109P.
PR 28-SEP-2000; 2000US-236111P.
PR 29-SEP-2000; 2000US-236842P.
PR 29-SEP-2000; 2000US-236891P.
PR 02-OCT-2000; 2000US-237172P.
PR 02-OCT-2000; 2000US-237173P.
PR 02-OCT-2000; 2000US-237278P.
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PR 03-OCT-2000; 2000US-237608P.
PR 01-NOV-2000; 2000US-244867P.
PR 01-NOV-2000; 2000US-245084P.
XX
PA (AVAL-) AVALON PHARM.
XX
PI Young PE, Augustus M, Carter KC, Ebner R, Endress G, Horrigan S;
PI Soppet DR, Weaver Z;
XX
DR WPI; 2002-188264/24.
XX
PT Screening for anti-neoplastic agent involves exposing cells to a
PT chemical agent to be tested for anti-neoplastic activity, and
PT determining a change in expression of a gene of a signature gene set
XX
PS Claim 1; SEQ ID 2314; 44pp; English.
XX
CC The present invention describes a method (M1) for screening for an
CC anti-neoplastic agent. The method involves exposing cells to a chemical
CC agent to be tested for anti-neoplastic activity, determining a change in
CC expression of at least one gene (I) of a signature gene set, where (I)
CC comprises a sequence (S) selected from 8447 sequences (given in ABL61664
CC to ABL70110), or is at least 95% identical to (S), where a change in
CC expression is indicative of anti-neoplastic activity. (I) has cytostatic
CC activity and can be used in gene therapy. M1 can be used for screening
CC an anti-neoplastic agent, and can be used for producing a product which
CC is the data collected with respect to the anti-neoplastic agent as a
CC result of M1, and the data is sufficient to convey the chemical
CC structure and/or properties of the agent. M1 can be used in the
CC treatment of cancer such as colon, breast, stomach, lung, thyroid,
CC oesophageal, ovarian, kidney, prostate or pancreatic cancer,
CC adenocarcinoma, carcinoma, clear cell cancer, infiltrating ductal cancer,
CC infiltrating lobular cancer, squamous cell carcinoma, neuroendocrine
CC carcinoma, papillary carcinoma and Wilm's tumour.
XX
SQ Sequence 448 BP; 128 A; 98 C; 94 G; 127 T; 1 other;

Query Match 99.8%; Score 447; DB 24; Length 448;
Best Local Similarity 100.0%; Pred. No. 4.9e-123;
Matches 448; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

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Qy          1 CAAGCCATGAAAAGCCTTTTAATGACAATTGGCATCACAGGTATAAATAAATATCTTCTT 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CAAGCCATGAAAAGCCTTTTAATGACAATTGGCATCACAGGTATAAATAAATATCTTCTT 60

Qy         61 CTTTCCATCTATAATATGTGCTACAAATATATTTTTCAAAGGTCCAACCCAGGTTAGGAG 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 CTTTCCATCTATAATATGTGCTACAAATATATTTTTCAAAGGTCCAACCCAGGTTAGGAG 120

Qy        121 GCTTCAAGGACCCTTTCTTAGCTACTGATTTTAGTAATTAAAAAAATAAACACAATAAAC 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 GCTTCAAGGACCCTTTCTTAGCTACTGATTTTAGTAATTAAAAAAATAAACACAATAAAC 180

Qy        181 ACCCCTGGCATCTTTGTGAGCGCCCCCCTGCGGAGAGCATCGAGGGCTGTCAGGCATCTT 240
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        181 ACCCCTGGCATCTTTGTGAGCGCCCCCCTGCGGAGAGCATCGAGGGCTGTCAGGCATCTT 240

Qy        241 CCTCCTGCAGCCGCAGCCAATGGAGCACACGGAGAACTGGAGTCAGGTGATCACGAAGGG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CCTCCTGCAGCCGCAGCCAATGGAGCACACGGAGAACTGGAGTCAGGTGATCACGAAGGG 300

Qy        301 GCTTATTTCACTGGGCGTGGTCTACGTTGCCACATGTGTCGCTTTGGGATGAATGCATTT 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 GCTTATTTCACTGGGCGTGGTCTACGTTGCCACATGTGTCGCTTTGGGATGAATGCATTT 360

Qy        361 TTTNCAATGTGCTGCTTACACAATTATGCTGGTTCCAAAAACACAGTTGGATTGGACAAT 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 TTTNCAATGTGCTGCTTACACAATTATGCTGGTTCCAAAAACACAGTTGGATTGGACAAT 420

Qy        421 CTAACATAGGATTTTAATCCTTAGAGGT 448
              |||||||||||||||||||||||||||
Db        421 CTAACATAGGATTTTAATCCTTAGAGGT 448
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